

Environmental Monitoring Report

Project number: 51077-002
Semi-Annual
October 2021

Maldives: Greater Malé Environmental Improvement and Waste Management Project

Prepared by the Ministry of Environment of the Republic of Maldives for the Asian Development Bank.

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Greater Malé Environmental Improvement and Waste Management Project
Semi-Annual Environmental Monitoring Report
November 2020 – April 2021

I. INTRODUCTION

A. OVERALL PROJECT DESCRIPTION AND OBJECTIVES

1. The objective of the project is to establish a sustainable solid waste management (SWM) system in the Greater Malé capital region and its inhabited outer islands by;

- (i) Establishing a modern waste collection, transfer, and disposal system,
- (ii) Improving community-based outer island waste management systems,
- (iii) Building institutional capacity for sustainable services delivery, and
- (iv) Raising public awareness in reduce, reuse, recycle (3R) behaviors.

2. Physical and non-physical investments are designed to curb climate change and disaster impacts while creating a cleaner environment in one of the world's lowest-lying nations.

3. The Greater Malé capital region and its outer islands (classified as Zone 3 in the National Solid Waste Management Policy and the most populated in the country), suffer from severe environmental pollution and deteriorating livability due to inadequate collection and haphazard disposal of solid waste. Open dumping and burning of garbage at the 30-year old 10-hectare dumpsite on Thilafushi Island (6 kilometers from Malé) creates a significant environmental and public health hazard. Plumes of smoke visible from the capital city Malé, the international airport, and surrounding resorts compromise air quality and pose a daily nuisance to residents and tourists, while toxic leachate contaminates soil and groundwater. Greater Malé and its inhabited outer islands lack an organized and sustainable waste management system for the 774 tons of mixed solid waste generated per day (tpd). With rapid urbanization and tourism development in the region, waste generation is expected to grow to 924 tpd by 2022 (footnote 4). The increasing pressure on an already-stressed waste management system poses a significant threat to tourism and fisheries, both of which rely heavily on the country's pristine environment and are cornerstones to the Maldives economy.⁵ Poor communities in outer islands suffer from accumulated garbage with limited awareness and capacity to effectively manage solid waste.

4. **Environmental category as per ADB Safeguard Policy Statement, 2009.** The project falls under category B.

5. **Environmental category of each subproject as per national laws and regulations.** The project falls under category B. All approval has been granted.

B. PROJECT SAFEGUARDS TEAM

Name	Designation/Office	Email Address	Contact Number	Roles
PMU				
Mohamed Asif	Social and Environmental Safeguard Specialist	Mohamed.asif@environment.gov.mv	3019233	-confirm whether IEEs/EMPs are included in bidding documents and civil works contracts; -provide oversight on environmental management aspects of subprojects and ensure EMPs are implemented by island councils and contractors
Consultants				
Abdul Aleem	Environmental Safeguard Expert (PMDSC team)	amooo@water-solutions.biz	3301643	-review the Contractor's Environmental Management Plan (CEMP) for adequacy in terms of compliance with the requirements of the EMP and instruct amendments and additions as necessary; -monitor contractors' implementation of the CEMPs; -ensure that relevant OHS provisions in the contracts are abided by the contractors during the construction works;
Mamdhooh Ali	Environmental Officer	mamdhooh.ali@mtcc.com.mv	3315050	-Provide environmental training and awareness to all staff -Ensure the implementation of the EMP -Receives complaints/grievances from the public, immediately implements the remedial measures and reports to the PMU and PMDSC

C. OVERALL PROJECT AND SUB-PROJECT PROGRESS AND STATUS

6. Consultant recruitment is in progress for the Disaster Risk Reduction Specialist. The Disaster Risk Reduction Specialist will support the PMU to incorporate and implement Disaster Risk Reduction and Climate Change Adaptation measures in the project.

7. Bid documents for various components are being prepared.

8. The institutional arrangements / roles of the PIU of the CW/01 package is given in the section 3 of the Contractor's EMP which is attached.

9. Project's COVID19 SOP prepared and being implemented.(attached for reference)

10. Table below provides description of subprojects (package-wise) and status of implementation (preliminary, detailed design, on-going construction, completed, and/or O&M stage)

Package Number	Components/List of Works	Type of Contract (specify if DBP, DB or civil works)	Contract Status (specify if under bidding or contract awarded)	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)	If On-going Construction	
					%Physical Progress	Expected Completion Date
CW/01	Harbor rehab, waste processing, admin building, workshop and civil works (platform) for Construction and Demolition (C&D) plant, recycling yard, and End of Life (ELV) dismantling workshop.	Civil works		- Contract Signed on 21st November 2019 - Site handover on 15th February 2020. - In survey of site completed by contractor with the Ministry of Environment's (ME) consultant. - Currently 25% physical works completed.	25	May 2021
DBI/01	Two Transfer stations (TS) in Male, and Villimale,	DB		- Announced on 1st June 2020. - Deadline for submission of proposals: 31st August 2020. - Evaluation ongoing. - Decision Statement (DS) for both sub-projects received. However, the DS for Male' TS is expired and EIA will be updated by the contractor. - Technical evaluation completed and price bid evaluation report submitted to ADB for no objection on 26th April 2021.	NA	NA
DBI/02	C&D waste processing plant (includes equipment)			- C&D waste processing plant bid announced on 21st May 2020. - TBER submitted to ADB for no objection.	NA	NA
CW /0 3	Outer island waste management	Civil works		Survey completed by PMDCSC, Concept design finalized		

¹ If on-going construction, include %physical progress and expected date of completion

	centers (32) Multiple lots.		for individual Island Waste Management Centers (IWMCs). Draft bidding documents received and under review by MOE for North Male', South Male and Vaavu atoll and all EMP's approved by EPA. Waiting for approval from ADB.		
G/01 G/02 G/04 G05 G06	Equipment and vessels		- Contracts signed for lots 1.2.4.5. and 6 - Delivery of equipment by June 2021	NA	NA
C/02	Public Awareness and Community Capacity Building consultant		Contract signed on 5th July 2020 and works ongoing.	NA	NA
C/01	Project Management, Design and Construction Supervision Consultants		Contract signed and works ongoing	NA	NA

II. COMPLIANCE STATUS WITH NATIONAL/STATE/LOCAL STATUTORY ENVIRONMENTAL REQUIREMENTS²

Package No.	Subproject Name	Statutory Environmental Requirements ³	Status of Compliance	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish
CW/01	Harbor rehab, waste processing, admin building, workshop and civil works (platform) for C&D plant, recycling yard, and ELV dismantling workshop.	IEE	Completed and published.	NA	Decision Statement (DS) from EPA is the final go ahead for the project. We have received the DS for all subprojects including CW/03 which was received around end of April.	NA
DBI/01	Two Transfer stations in Male, Villamale, and (Civil Works Contract (SBD Plant-Design, build and install) Male and Vilimale (incl. 6 story admin in Male)	EIA required. Decision Statement (DS) for both sub-projects received. However, the DS for Male' TS is expired and we are	Approved Decision Statements (DS) received for both Transfer Station (TS) EIAs. Vilimale TS DS issued on			Other than what is included in the EIA, no specific requirement as per the DS.

		now in the process of applying for renewal of DS.	05 th March 2020. Male TS DS issued on 16 th July 2017			
DBI/02	C&D waste processing plant (includes equipment)	NA	NA	NA		NA
CW /0 3	Outer island waste management centers (32) Multiple lots.	EMP required for individual islands	DS received from EPA around end of May.	NA		NA
G/01	Dumpsite equipment for immediate management measures on Thilafushi Island Lot 1: Industrial and mobile waste shredder Lot 2: Industrial and mobile rotating sieving machine Lot 3: Bulldozer Lot 4: Excavators, wheel loader and waste handler Lot 5: Arm roll trucks, tank truck, containers	NA	NA	NA		NA
G/02	Collection and transport equipment (trucks, bins, containers) Lot 1: Containers and bins Lot 2: RCVs (5 m ³ multi car, 16 m ³) Lot 3: Hook lift trucks and skip loaders, trucks with crane	NA	NA	NA		NA

	Lot 4: Tipping trucks (small for outer islands)					
G/04	Outer Island transfer vessels	NA	NA	NA		NA
G/05	Procurement of equipment for transfer and transport of waste (vehicles, containers, cranes , roll packers, conveyors) Lot 1: Mobile crane/reach stacker (Male) Lot 2: Mobile conveyor (Thilafushi) Lot 3: Roll packers Lot 4: Wheel loaders Lot 5: Fork lift Lot 6: Arm roll /tipping trucks, containers Lot 7: Street sweepers Lot 8 : Workshop equipment	NA	NA	NA		NA
G/06	Outer island waste management centers equipment	NA	NA	NA		NA
C/01	Project Management, Design and Construction Supervision Consultants	NA	NA	NA	NA	NA
C/02	Public Awareness and Community Capacity Building consultant	NA	NA	NA	NA	NA

III. COMPLIANCE STATUS WITH ENVIRONMENTAL LOAN COVENANTS

No. (List schedule and paragraph number of Loan Agreement)	Covenant	Status of Compliance	Action Required
Schedule 4 - 2 Environment	The Recipient, through MOFT and MEE, shall 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 Recipient	Being complied. PMU (Project Management Unit) is continuously ensuring that all sub projects are in	
	relating to environment, health and safety; (b) the Environmental Safeguards; (c) the EARF, and (d) all measures and requirements set forth in the IEEs, the EMPs, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.	compliance with all laws and regulations and the Safeguards specialist of the PMU ensures that all measures and requirements set forth in the IEEs and EMP are complied.	
Schedule 4 – 4 Human and Financial Resources to Implement Safeguards Requirements	The Recipient shall make available or cause MOFT to make available necessary budgetary and human resources to fully implement the EMPs	Being complied. The MOFT has approved the post of Safeguards Specialist for the PMU so that all necessary safeguards issues are complied.	
Schedule 4 – 5 Safeguards-Related Provisions in Bidding Documents and Works Contracts	A- comply with the measures relevant to the contractor set forth in the IEE and the EMP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report;	All bidding documents related to the project will have the IEE included and compliance will be ensured by the safeguards specialist.	
	B- make available a budget for all such environmental measures; and		
	C- provide the Recipient with a written notice of any unanticipated environmental, resettlement or indigenous peoples risks or impacts that arise during construction, implementation or operation of the Project that were not considered in the IEE and the EMP.		
Schedule 4 – 6 Safeguards Monitoring and Reporting	A- submit semiannual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission;	Monitoring Reports are semiannually submitted to ADB for approval and disclosure. This is the second report of 2020	
	B- If any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEEs and the EMPs, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and	Will be complied as and when arises. In such cases ADBs safeguards team and team leader will be informed immediately.	
	C- Report any actual or potential breach of compliance with the measures and requirements set forth in the EMPs promptly after becoming aware of the breach.	Will be complied. Any breach or potential breach will be reported.	
Schedule 4 – 7 Prohibited List of Investments	The Recipient, through MOFT and MEE, shall ensure that no proceeds of the Grant are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the SPS.	Being complied. ADB SPS will be thoroughly followed throughout the project duration.	
Schedule 4 – 8 Labor Standards, Health and Safety	F- disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including HIV/AIDS, to the employees of contractors engaged under the Project and to members of the local communities surrounding the Project area, particularly women.	contracts It is included in the Bidding Documents and contract. COVID 19 SOP prepared for the project will be attached.	

Schedule 4 – 9	The Recipient, through MOFT and MEE, shall strictly monitor compliance with the requirements set forth in paragraph 8 above and provide-ADB with regular reports.	Will be complied	
Schedule 4 – 10 Gender and Development	B- the bidding documents and contracts include relevant provisions for contractors to comply with the measures set forth in the GAP;	Will be provided in all bid documents / contracts	
Schedule 4 – 10 Governance and Anticorruption	(a) comply with ADB's Anticorruption Policy (1998, as amended to date) and acknowledge that ADB reserves the right to investigate directly, or through its agents, any alleged corrupt, fraudulent, collusive or coercive practice relating to the Project;	Will be complied	

IV. COMPLIANCE STATUS WITH THE ENVIRONMENTAL MANAGEMENT PLAN (REFER TO EMP TABLES IN APPROVED IEE/S)

- Confirm if IEE/s require contractors to submit site-specific EMP/construction EMPs. If not, describe the methodology of monitoring each package under implementation.

Site specific / contractor's EMP (CEMP) are required to be submitted by the contractor. As of now, there is only one sub project which is awarded and ongoing, which is the Harbour Rehabilitation Project. The CEMP was submitted and approved by the PMDCS consultant and is being implemented. The CEMP is attached in the annex for reference.

Package-wise IEE Documentation Status

Package Number	Final IEE based on Detailed Design				Site-specific EMP (or Construction EMP) approved by Project Director? (Yes/No)	Remarks
	Not yet due (detailed design not yet completed)	Submitted to ADB (Provide Date of Submission)	Disclosed on project website (Provide Link)	Final IEE provided to Contractor/s (Yes/No)		
CW/01		March 2018	https://www.adb.org/projects/documents/mid-51077-002-iee-0	YES	YES	No major changes made to the concept design. Therefore the currently published version is considered as the final document. CEMP prepared by contractor

						and approved. CEMP Implementation on going.
DBI/01		March 2018	https://www.adb.org/projects/documents/mid-51077-002-iee	NO		
DBI/02	NA					
CW /0 3		March 2018	https://www.adb.org/projects/documents/mid-51077-002	NO		EPAs DS for all islands for CW/03 was received around end of April. IEEs being finalized for all islands.
G/01	NA					
G/02						
G/04						
G/05						
G/06						
C/01	NA					
C/02	NA					

- For each package, provide name/s and contact details of contractor/s' nodal person/s for environmental safeguards.
- Provided on section B.

Package-wise Contractor/s' Nodal Persons for Environmental Safeguards

Package Name	Contractor	Nodal Person	Email Address	Contact Number
CW/01	Maldives Transport and Contracting Company (MTCC)	Mamdhooh Ali	mamdhooh.ali@mtcc.com.mv	3326822
DBI/01	Contractors still to be appointed for these packages			
DBI/02				
CW /0 3				
G/01				
G/02				
G/04				
G/05				
G/06				
C/01	Water Solutions Pvt Ltd	Abdul Aleem	amooo@water-solutions.biz	3301643
C/02	NA			

- With reference to approved EMP/site-specific EMP/construction EMP, complete the table below

Summary of Environmental Monitoring Activities

Impacts (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring
Air Quality	NO ₂ , CO ₂ PM ₁₀ , PM _{2.5} ,	On site. Handheld air quality monitoring devices used (Aeroqual series 500) 15 minute average taken for each parameter.	Harbor Rehab Site, Thilafushi	18 th May 2021	Ibrahim Faiz
Water Quality	DO, TSS, Salinity, Turbidity NTU, Temp pH.	Sample taken on site by digging a hole using an excavator. Water tested by the contractor.	Harbor Rehab Site, Thilafushi	12 th April 2021	Mamdhooh Ali
Noise	Noise L _{Aeq} 1hr	Noise measured on site for 60 minutes average taken for day time and 60 minute average taken in the night time.	Harbor Rehab Site, Thilafushi	12 th April 2021	Mamdhooh Ali

Impacts	Location	Mitigation Measures	Performance Standard	Source of Funds	Responsibility for Implementation	Responsibility for Supervision	Remarks
Waste generation from construction activities	Thilafushi	All solid waste must be disposed of at a landfill or approved disposal site. Importation of any materials rated as hazardous under the Globally Harmonized System of Classification and Labeling of Chemicals to be subject to approval by PMDSC, which will be conditional on stating adequate arrangements for disposal.	Sites free of construction waste on commissioning. Written PMDSC approval available for any hazardous chemical in use	Construction Cost	Contractor	PMDSC	All waste disposed of at the waste dumpsite. No sign of any waste at the project site.
Accumulated waste at the construction site and contaminated land	All areas where construction is to take place	Accumulated waste to be separated into main fractions and disposed on existing dumpsite. For sites found to be contaminated, the contractor is to undertake a risk assessment, quantitatively assess risks to the environment and arrange for	Risk assessments and plans for treatment, removal or containment approved by PMDSC and carried out	Construction Cost	Contractor	PMDSC	No sites contaminated due to project activities. All waste disposed of at the waste dumpsite. No sign of any waste at the project site

		appropriate treatment, removal or containment as appropriate					
Release of silt	Thilafushi	Excavated areas to be rapidly refilled on completion of works. Use of silt fences around temporary piles of excavated material. Avoid excavation in wet weather to the extent practicable.	Number of instances when silt release is uncontrolled	Construction Cost	Contractor	PMDSC	As of this reporting period, no instance when silt release is uncontrolled.
Water pollution	Thilafushi	Vehicles and plant are to be maintained in sound operable condition, free of leaks. The condition of vehicles and equipment will be periodically checked. Contractor to prepare and submit a plan for spill management, including provision of spill kits, training/briefing of workers on procedures on handling spills and allocation of responsibility within the contractor's team for ensuring that spill kits are available	Vehicles and construction plant to have at all times at a minimum: (i) intact and securely fitted exhaust pipes and mufflers (ii) operable brakes (iii) no fuel or lubricant leaks. Spill kits on site at all times	Construction Cost	Contractor	PMDSC	Vehicles undergo mandatory "road worthiness certification" before the registration of vehicles by the Maldives Transport Authority.

		and that workers know how to use them.					
Community health and safety hazards	Thilafushi	Restriction of access to the site. For work at the periphery of the sites, provide notices to the public identifying hazards and erect safety barriers / covers for areas of open excavation. Contractors to adopt the WB EHS Guidelines on Community Health and Safety, particularly those that relate to construction works.	Barriers and notices to be in place at all times, entrance to sites actively controlled	Construction Cost	Contractor	PMDSC	The project site is cordoned off with barriers and notices placed around the site. Entrance to site controlled.
Occupational health and safety hazards	Thilafushi	Contractors to appoint health and safety officers for each site and to ensure regular briefing of construction workforce on health and safety issues. Adequate personal protective equipment to be provided to the workforce. Contractors to adopt the WB EHS Guidelines on OHS,	Member of the Contractor's staff nominated as health and safety officer to be present on site. Appropriate protective equipment to each construction operation to be worn at all times (including steel toe capped boots at all times, hard hats when working near machinery or roofing work, eye	Construction Cost	Contractor	PMDSC	Safety officer appointed. Protective equipment worn at all times. COVID19 SOP being followed at the site.

		particularly those that relate to construction works.	protection for welding)				
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Overall Compliance with CEMP/ EMP

No.	Sub-Project Name	EMP/ CEMP Part of Contract Documents (Y/N)	CEMP/ EMP Being Implemented (Y/N)	Status of Implementation (Excellent/ Satisfactory/ Partially Satisfactory/ Below Satisfactory)	Action Proposed and Additional Measures Required
	Harbor Rehab	CEMP prepared	Yes	Satisfactory	NA

11. The contractor had some difficulties in the implementation of CEMP as the cases were on the rise at this reporting period, there were lot of difficulties faced. Even though the lockdown was lifted, the COVID cases were on the rise and we have been having the highest ever recorded daily COVID infection rates. Travel restrictions were imposed and curfew was announced on specific times each day with curfew times extended every week. The status of implementation was marked as 'Satisfactory' as there were some difficulties faced by the contractor due to these issues.

12. The safeguard specialist of PMDCSC was positive for COVID19 around March 2021 while on the IWMC EIA survey trips to AA and ADh atolls. All people in contact, including the whole safeguards team of PMDCSC and PMU were quarantined as per the advice from the Health Protection Agency.

13. Later around April, there was an incident of COVID19 exposure at the Harbour Rehab Site. The reason for the current jobsite exposure situation was unavoidable and no breach was observed at the Harbor Rehab site at Thilafushi. The COVID19 daily positive cases are at an all-time high at the moment with daily cases rising above 1400 out of a sample size of 3700 which means more than 39% tested are positive for COVID19.

14. The patient zero at the Harbor Rehab site was the Chef, all workers reside at the site's workers camp. The chef went to the Hospital in Male for a medical checkup. A few days after that he started showing symptoms. As soon as he started showing symptoms, he was isolated and HPA was informed and requested for COVID19 PCR test. HPA tested the chef and all other helpers in the kitchen and the security guard who was in touch with the chef. Five workers tested positive and another 7 workers who were in contact with the chef were isolated. All contacted workers were isolated for more than 15 days and tested for COVID. All results came negative. All 5 workers who got infected were also tested again after more than 15 days in quarantine and all results came back negative. All isolation rooms, residential areas and workers areas were disinfected.

15. Due to these unavoidable and unforeseen complications, the efficiency of work was not up to the mark. And overall compliance with the monitoring activities were also affected with contractor facing numerous difficulties.

- Provide list of trainings on environmental safeguards, core labor standards, and OSH conducted during the reporting period. Include ADB-organized workshop, trainings, seminars, etc)

Trainings, Workshops and Seminars Conducted

Date	Topic	Conducted by	No. of Participants (Total)	No. of Participants (Female)	Remarks
-	-	--	-	-	-

For this reporting period, there were no lock down, however the government-imposed travel restrictions and curfew for selected timings every day. HPA has discouraged gatherings due to the increasing cases of COVID19 in Maldives. The highest ever positive cases reported in 24hrs time for Maldives. Therefore, for the safety of all staff, no trainings/workshops were conducted as it was discouraged by the Health Protection Agency of Maldives, however, as the COVID19 situation eases trainings will be conducted. A physical training will be conducted if allowed and if not, a virtual/online training will be conducted. A timeframe/schedule can be given after necessary permits are obtained.

V. APPROACH AND METHODOLOGY FOR ENVIRONMENTAL MONITORING OF THE PROJECT

16. For the CW/01 package: Harbor rehabilitation, waste processing, admin building, workshop and civil works (platform) for C&D plant, recycling yard, and ELV dismantling workshop. Monitoring was completed for this component. EPA and PMDCS Consultants (Water Solutions) assisted with this component.

17. Air quality, water quality and noise measurements were taken at the site. Air quality measurements were taken using handheld air quality monitoring devices (Aeroqual Series 500) and water samples were taken from the site and tested. Noise measurements were taken with a sampling period of about 60 minutes each.

18. For Air quality monitoring, SO₂, NO₂, PM₁₀, PM_{2.5}, and CO₂ levels were measured. And for the Water quality testing, TSS, DO, Turbidity, pH, salinity and temperature were measured.

19. TPH, BOD and some metals could not be tested at the time in Maldives.

VI. MONITORING OF ENVIRONMENTAL IMPACTS ON PROJECT SURROUNDINGS (AMBIENT AIR, WATER QUALITY AND NOISE LEVELS)

20. The project site is just next to the existing waste dumpsite to the west and a scrap metal yard to the east.

21. The contractor of this subproject (Harbor Rehabilitation) is Maldives Transport and Contracting Company (MTCC). The project site was handed over on 15th February 2020 and the In survey of the site has now been completed. By the time this monitoring report was prepared, more than 20% of the physical works were completed.

22. Maldives declared its first ever state of public health emergency, under Section 33 of the 7/2012 Public Health Act on over the COVID-19 pandemic from March 12 onwards for a period of 30 days. It was then extended since then.

23. Travel restrictions were imposed by the Health Protection Agency for most of the days of the reporting period. Hence some difficulties were faced on conducting the monitoring activities on time.

24. The project site was cordoned off to prevent people from getting in.

25. Compliance monitoring completed for this component. Assistance was provided by EPA and PMDCS Consultants (Water Solutions) for this.

26. Air quality, water quality and noise measurements were taken at the site. Air quality measurements were taken using handheld air quality monitoring devices (Aeroqual Series 500) and water samples were taken from the site and tested. Noise measurements were taken with a sampling period of about 60 minutes each.

27. For air quality monitoring, NO₂, PM₁₀, PM_{2.5} and CO₂ levels were measured. SO₂ and O₃ could not be measured at this time as the sensor heads were damaged. However SO₂ levels and other parameters were measured by the contractor on February 23rd 2021 (Monitoring report attached in appendix) Will provide all parameters on the next reporting period. And for the water quality testing, TSS, DO, Turbidity, pH, salinity and temperature were measured. BOD, TPH and some metals could not be tested at the time in Maldives.

- Confirm records of pre-work condition of roads, agricultural land or other infrastructure prior to starting to transport materials and construction.

Package No.	Status of Pre-Work Conditions (Recorded / Not Recorded)	Baseline Environmental Conditions (air, water, noise) Documented (Yes / No)	Action Proposed and Additional Measures Required
CW/01	N/A	Yes. monitoring conducted. Included in previous SEMRs	None

Air Quality Guidelines

WHO Air Quality Guidelines:

	Averaging Period	Guideline value in $\mu\text{g}/\text{m}^3$
SO₂	24h	125 (Interim target-1) 50 (Interim target-2) 20 (guideline) 500 (guideline)
NO₂	1-year 1-hour	40 (guideline) 200 (guideline)
PM₁₀	1-year	70 (Interim target-1) 50 (Interim target-2) 30 (Interim target-3) 20 (guideline)
	24-hour	150 (Interim target-1) 100 (Interim target-2) 75 (Interim target-3) 50 (guideline)
PM_{2.5}	1-year	35 (Interim target-1) 25 (Interim target-2) 15 (Interim target-3) 10 (guideline)
	24-hour	75 (Interim target-1) 50 (Interim target-2) 37.5 (Interim target-3) 25 (guideline)
O₃	8-hour daily maximum	160 (Interim target-1) 100 (guideline)

Air Quality Results

(Monitoring conducted by PMDCSC and PMU)

Date of Testing	Site Location	Parameters				Remarks
		PM10 mg/m3	PM2.5 mg/m3	NO2 mg/m3	CO2 mg/m3	
18 th May 2021	project site thilafushi 4°10'53.4"N 73°26'38.4"E	0.03	0.0078	0.0658	454.4	Performance Indicator: EU Air Quality Directive (2008/50/EC) and WHO Air Quality Guideline. All parameters within the maximum concentration limit.

(AQ Monitoring conducted by Contractor-taken from the Contractor's Monitoring Report – See Appendix)

Parameters	AQ1	AQ2	AQ3	AQ4
PM ₁₀	0.109	0.037	0.129	0.039
PM _{2.5}	0.027	0.026	0.028	0.024
SO ₂	0.16	0.25	0.16	0.63
NO ₂	0.076		0.086	0.094

AQ monitoring parameters given in mg/m3

The air quality results taken on this reporting period complies with the WHO air quality guideline. For air quality monitoring, NO2, PM10, PM2.5 and CO2 levels were measured. SO2 and O3 could not be measured at this time as the sensor heads were damaged. However SO2 levels and other parameters were measured by the contractor on February 23rd 2021 (Monitoring report attached in appendix) Will try to provide all parameters on the next reporting period.

Water Quality Guidelines

Wastewater and Ambient Water Quality Guideline. (World Banks EHS General Guidelines)

Pollutants	Units	Guideline Value
pH	pH	6 to 9
BOD	mg/l	30
COD	mg/l	125
Total nitrogen	mg/l	10
Total phosphorus	mg/l	2
Oil and grease	mg/l	10
Total suspended solids	mg/l	50
Total coliform bacteria	MPN / 100 ml	400

Water Quality Results

Parameter	Optimum Range	SW1	SW2	SW3	SW4	SW5	SW6	SW7
Physical Appearance	-	Clear with Particles	Clear with Particles	Clear with Particles	Clear with Particles	Clear with Particles	Clear with Particles	Pale green with particles
pH	6.0 - 9.0 (ANZECC, 2000)	8.5	8.43	8.41	8.45	8.45	8.52	8.49
Temperature (°C)	18 - 32 (ANZECC, 2000)	29.6	29.51	29.47	29.57	29.65	30.68	30.2
Turbidity (NTU)	<3 (EPA)	0.25	0.09	0.08	0.05	0.04	1.5	1.89
Total Suspended Solids	<5 (EPA)	<5	<5	<5	<5	<5	<5	<5
Salinity (‰)	-	34.94	34.95	34.93	34.97	34.99	35.00	34.81
DO (mg/L)	-	5.98	6.07	6.39	6.30	6.10	7.00	7.23

Taken from Ground water quality results from MWSC (attached in the appendix)

Date of Sampling	Site Location	Parameters										Remarks
		Physical Appearance	Total Coliform	Conductivity µs/cm	Iron, mg/L	Nitrate mg/L	TSS mg/L	Turbidity NTU	Manganese mg/L	Phosphate mg/L	pH	
	project site thilafushi											Performance Indicator:National Waste Water Quality Guidelines / EPA The water test results shows that the ground water from the site has high coliform and TSS values. This site was reclaimed using waste around 20- 25 back.
19 th Jan 2021	4°10'53.9"N	Brown with particles	>2420	16860	0.22	33.8	8430	218	0.141	0.24	7.84	
	73°26'39.8"E											

For the water quality testing, TSS, DO, Turbidity, pH, salinity and temperature were measured. BOD, TPH and some metals could not be tested at the time in Maldives. Except the TSS and total coliform values, all the parameters of the water quality test results complies with the standards of the World Banks Environmental, Health and Safety General Guidelines. The reason of the high tss and coliform values are probably due to the fact that this land was reclaimed using waste around 20-25 years back.

Noise Measurements

Guidelines for Community Noise, World Health Organization (WHO), 1999

Receptor	Daytime	Night time
Residential, Institutional, educational	55	45
Industrial, commercial	70	70

Noise measurements at site:

Site No.	Date of Testing	Site Location	LAeq (dBA)		Remarks
			Day Time	Night Time	
1	21 th April 2021	project site thilafushi 4°10'53.4"N 73°26'38.4"E	85.8	68.3	The Environmental noise directive (END) 2002/49/EC and WHO guidelines for community noise. As this site is a heavy industrial area, the measured values on day time is high as on daytime heavy vehicles are being operated at the site. The project site is not close to any residential areas.

Date	Time	LAeq60
21/04/2021	13:05:23	82.8
21/04/2021	14:05:23	89.1
21/04/2021	15:05:23	85.5
21/04/2021	19:41:32	72.6
21/04/2021	20:41:32	69.2
21/04/2021	21:41:32	63.1

All the noise measurements taken on this reporting period complies with the WHO's guideline for community noise except for the day time measurements which are a bit high with reference to the WHO's guidelines for industrial areas. The reason for the high values for noise maybe due to the operation of heavy vehicles at the site at the time of measurement. As the Harbor Rehabilitation sub projects works are ongoing at this time, the noise levels may be high at the day time. The workers on the site will be instructed to wear ear plugs until the noise levels come down to less than 70 dBA.

VII. INFORMATION DISCLOSURE AND CONSULTATIONS

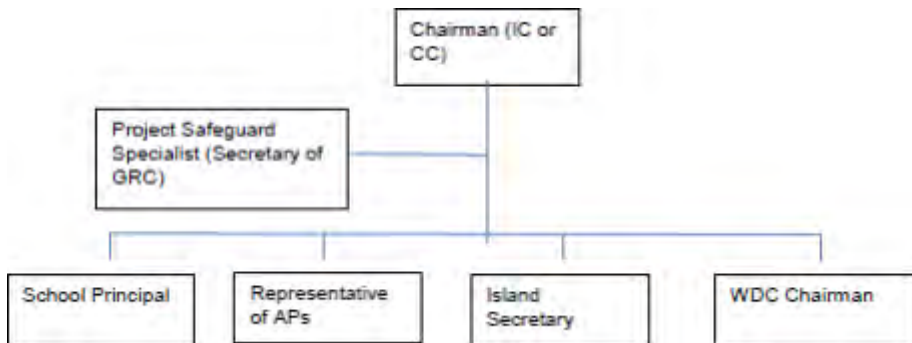
- Confirm PMU/PIU/contractors provide project-related information to stakeholders, communities and/or affected people before and during construction works.¹¹
- Provide information on consultations conducted during reporting period such dates, topics discussed, type of consultation, issues/concerns raised, safeguards team member present. Attach minutes of meetings (ensure English translation is provided), attendance sheet, and photos.

Date of Consultation	Location	Number of Participants (specify total, male and female)	Issues/Concerns Raised	Response to issues/concerns
N/A				

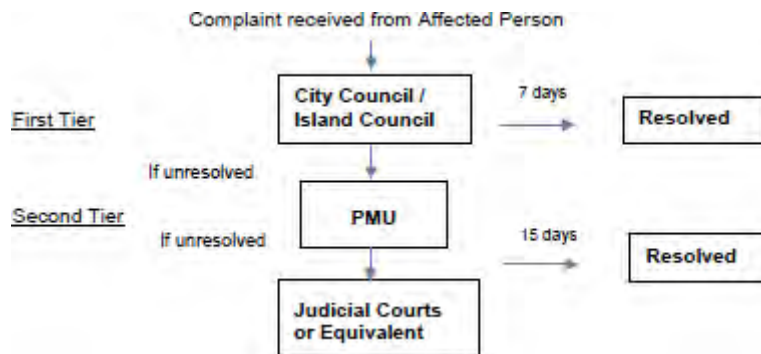
For the reporting period, no consultations were conducted as it was discouraged by the Health Protection Agency of Maldives, however, as the COVID19 situation eases, information sessions and consultations will be conducted.

VIII. GRIEVANCE REDRESS MECHANISM

No grievances received for the reporting period. The first and second tiers are active and ready to receive grievances. member to represent an active non-governmental organization (eg. Women's development committee).



1. As Thilafushi is not a residential island, there are no schools, Island council offices or Island development committees. However, Thilafushi is part of the Male' City council. Therefore the affected personnel can send their grievances to the Male' City Council which is the first tier. The second tier GRC, as per the IEE, which is the PMU of ME is active and ready for reception of any grievances from the project.



IX. COMPLAINTS RECEIVED DURING THE REPORTING PERIOD

2. Nil

X. SUMMARY OF KEY ISSUES AND REMEDIAL ACTIONS

3. No environment safeguard issues during the reporting period. However, there was an incident of COVID19 exposure at the Harbour Rehab Site. The reason for the current jobsite exposure situation was unavoidable and no breach was observed at the Harbor Rehab site at Thilafushi. The COVID19 daily positive cases are at an all-time high at the moment with daily cases rising above 1400 out of a sample size of 3700 which means more than 39% tested are positive for COVID19.
4. The patient zero at the Harbor Rehab site was the Chef, all workers reside at the site's workers camp. The chef went to the Hospital in Male for a medical checkup. A few days after that he started showing symptoms. As soon as he started showing symptoms, he was isolated and HPA was informed and requested for COVID19 PCR test. HPA tested the chef and all other helpers in the kitchen and the security guard who was in touch with the chef. Five workers tested positive and another 7 workers who were in contact with the chef were isolated. All contacted workers were isolated for more than 15 days and tested for COVID. All results came negative. All 5 workers who got infected were also tested again after more than 15 days in quarantine and all results came back negative. All isolation rooms, residential areas and workers areas were disinfected.

XI. STATUS OF CORRECTIVE ACTIONS FROM PREVIOUS SEMR(S)

Corrective actions or improvements requested on previous SEMR's as provided by ADB include:

Issues/Concerns	Corrective Action	Status	Remarks
To include all the data sheets for air quality monitoring	To be included in the SEMR	included	included
To include the contact information of safeguards team.	To be included in the SEMR	included	included

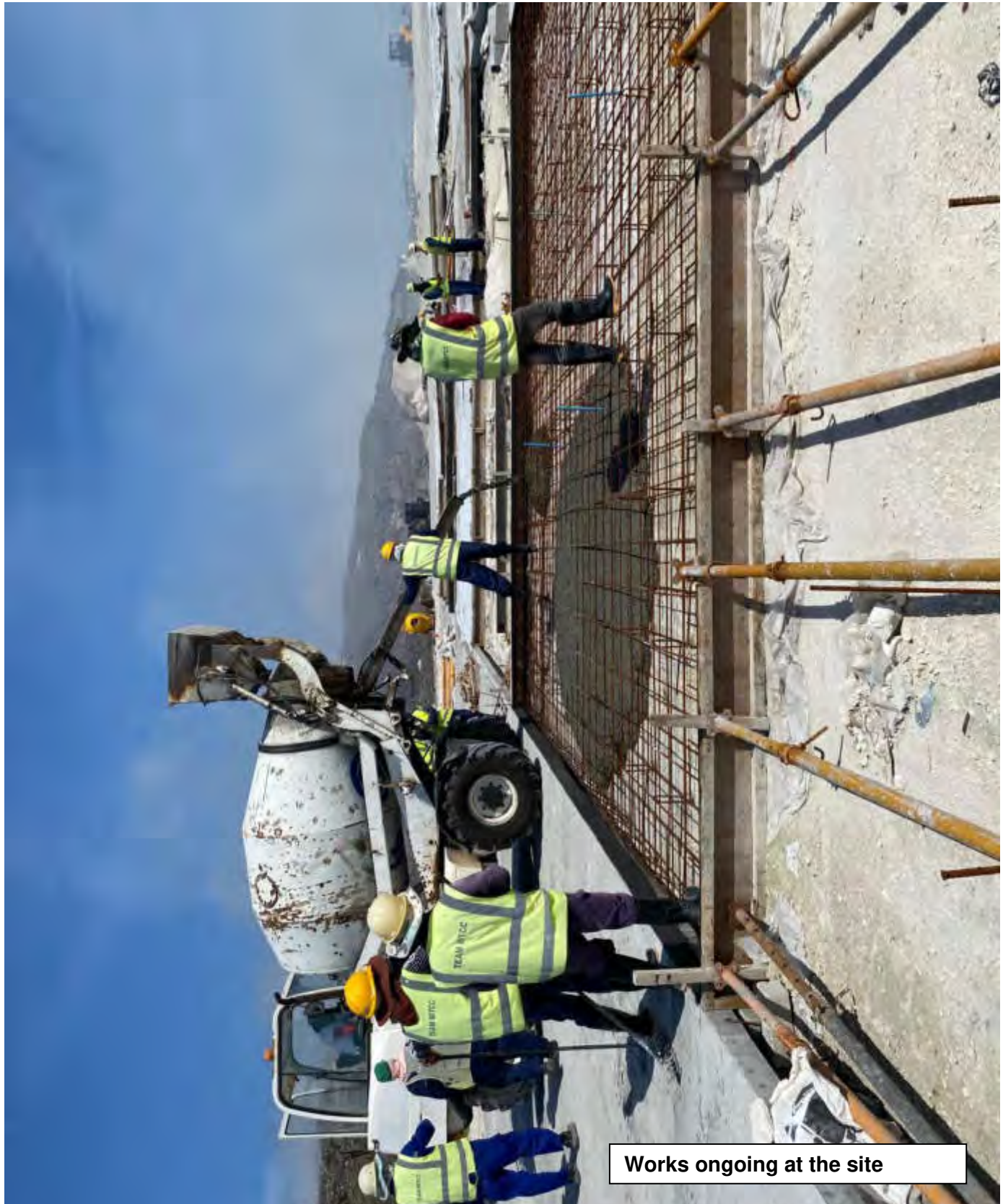
XII. APPENDIXES

XIII. PHOTOS – ATTACHED (GEOGRAPHIC COORDINATES OF THE SITE: 4°10'53.4"N 73°26'38.4"E)

5. Air Quality Monitoring Data
6. Noise Measurements Data
7. Water Quality Test
8. Approved CEMP
9. Copies of Environmental Clearances and Permits

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Photos from the site



Works ongoing at the site



Works ongoing at the site

Works ongoing at the site





Works ongoing at the site



“No entry without mask” boards at the site



PMU and contractor teams at the Harbor Rehabilitation site



Hand wash stations and posters at the Harbour Rehabilitation site





PMU and contractor teams at the Harbor Rehabilitation site



Air Quality Monitoring Data

(Lifted from excel sheet prepared by the monitoring team)

Date Time	Monitor ID	Location ID	CO2(ppm)	PM10(ppm)	PM2.5(ppm)	NO2(ppm)
18-5-21 11:08	1	8 (near quaywall)		0.078	0.015	
18-5-21 11:09	1	8 (near quaywall)		0.025	0.009	
18-5-21 11:10	1	8 (near quaywall)		0.022	0.008	
18-5-21 11:11	1	8 (near quaywall)		0.046	0.007	
18-5-21 11:12	1	8 (near quaywall)		0.045	0.014	
18-5-21 11:13	1	8 (near quaywall)		0.04	0.006	
18-5-21 11:14	1	8 (near quaywall)		0.025	0.01	
18-5-21 11:15	1	8 (near quaywall)		0.016	0.006	
18-5-21 11:16	1	8 (near quaywall)		0.025	0.011	
18-5-21 11:21	1	8 (near quaywall)	466			
18-5-21 11:22	1	8 (near quaywall)	459			
18-5-21 11:23	1	8 (near quaywall)	459			
18-5-21 11:24	1	8 (near quaywall)	454			
18-5-21 11:25	1	8 (near quaywall)	456			
18-5-21 11:30	1	8 (near quaywall)				
18-5-21 11:31	1	8 (near quaywall)				
18-5-21 11:32	1	8 (near quaywall)				
18-5-21 11:33	1	8 (near quaywall)				
18-5-21 11:34	1	8 (near quaywall)				
5/18/2021 18:18	2	8 (near quaywall)				0.044

5/18/2021 18:19	2	8 (near quaywall)				0.061
5/18/2021 18:20	2	8 (near quaywall)				0.067
5/18/2021 18:21	2	8 (near quaywall)				0.063
5/18/2021 18:22	2	8 (near quaywall)				0.078
5/18/2021 11:49	1	9 (near WAMCO Office)		0.022	0.004	
5/18/2021 11:50	1	9 (near WAMCO Office)		0.015	0.003	
5/18/2021 11:51	1	9 (near WAMCO Office)		0.017	0.004	
5/18/2021 11:52	1	9 (near WAMCO Office)		0.018	0.004	
5/18/2021 11:57	1	9 (near WAMCO Office)	459			
5/18/2021 11:58	1	9 (near WAMCO Office)	452			
5/18/2021 11:59	1	9 (near WAMCO Office)	447			
5/18/2021 12:00	1	9 (near WAMCO Office)	447			
5/18/2021 12:01	1	9 (near WAMCO Office)	445			
5/18/2021 12:06	1	9 (near WAMCO Office)				
5/18/2021 12:07	1	9 (near WAMCO Office)				
5/18/2021 12:08	1	9 (near WAMCO Office)				
5/18/2021 12:09	1	9 (near WAMCO Office)				
18-5-21 18:54	2	9 (near WAMCO Office)				0.065
18-5-21 18:55	2	9 (near WAMCO Office)				0.057
18-5-21 18:56	2	9 (near WAMCO Office)				0.073
18-5-21 18:57	2	9 (near WAMCO Office)				0.072
18-5-21 18:58	2	9 (near WAMCO Office)				0.078

Noise Measurements in dBA

Date	Time	LAeq60
21/04/2021	13:05:23	82.8
21/04/2021	14:05:23	89.1
21/04/2021	15:05:23	85.5
21/04/2021	19:41:32	72.6
21/04/2021	20:41:32	69.2
21/04/2021	21:41:32	63.1

Water Quality Test report

Parameter	Optimum Range	SW1	SW2	SW3	SW4	SW5	SW6	SW7
Physical Appearance	-	Clear with Particles	Clear with Particles	Clear with Particles	Clear with Particles	Clear with Particles	Clear with Particles	Pale green with particles
pH	6.0 - 9.0 (ANZECC, 2000)	8.5	8.43	8.41	8.45	8.45	8.52	8.49
Temperature (°C)	18 - 32 (ANZECC, 2000)	29.6	29.51	29.47	29.57	29.65	30.68	30.2
Turbidity (NTU)	<3 (EPA)	0.25	0.09	0.08	0.05	0.04	1.5	1.89
Total Suspended Solids	<5 (EPA)	<5	<5	<5	<5	<5	<5	<5
Salinity (‰)	-	34.94	34.95	34.93	34.97	34.99	35.00	34.81
DO (mg/L)	-	5.98	6.07	6.39	6.30	6.10	7.00	7.23

Approved CEMP

(attached)

Copies of Environmental Clearances and Permits
(attached)



CONSTRUCTION ENVIRONMENT MANAGEMENT PLAN

Thilafushi Harbour Rehabilitation Project



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Abbreviations

BOD	- Biochemical Oxygen Demand
CEMP	- Construction Environmental Management Plan
EIA	- Environmental Impact Assessment
EMP	- Environmental Management Plan
EPA	- Environmental Protection Agency
GRM	- Grievance Redress Mechanism
IEE	- Initial Environmental Examination
MSDS	- Material Safety Data Sheet
MTCC	- Maldives Transport and Contracting Company
PMC	- Project Management Consultant
PMDSC	- Project Management, Design and Supervision Consultants
PMU	- Project Management Unit
TPH	- Total Petroleum Hydrocarbon
TSS	- Total Suspended Solids

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN – THILAFUSHI HARBOUR REHABILITATION PROJECT

1. Introduction

This construction environmental management plan is an implementation plan that consists of mitigation measures, monitoring program and institutional setup to be adapted during construction phase of the project to minimize adverse environmental and social impacts. This plan also includes actions that can be taken to implement mitigation measures.

a. Plan objectives

- (i) Determine an effective system to manage environmental impacts
- (ii) carry out all the monitoring and mitigation measures identified in the EMP
- (iii) Implement corrective or preventative actions stated in safeguards monitoring reports

b. Project overview

The proposed infrastructure developments are to form part of an improved integrated system of waste management which are to take place on the southern part of Thilafushi island, allocated to the regional waste management facility (RWMF).

The planned works comprise the following:

- (i) general site improvements to drainage and site security;
- (ii) rehabilitation of the waste vessel harbor and waste handling area to improve the docking facilities and the condition of the adjoining area;
- (iii) construction of administration building;
- (iv) construction of weigh bridges;
- (v) construction of C&D waste processing plant; and
- (vi) construction of ELV dismantling workshop.

2. Environmental Impacts and Mitigation

The environmental impacts associated with the construction phase result from construction of buildings, construction of carriageway and transportation of construction material and construction workforce camp are identified below. The impacts will be mainly on the land and socio-economic

environments. The mitigation measures for the activities, which are exerting impacts on the environment, are presented in the following sections.

The measures proposed to be adopted for mitigation of the impacts are:

- Interaction with neighboring land users will be held so that they are made aware of the construction.
- Fire-fighting equipment will be installed at the construction sites for addressing potential fire related risks and accidents.
- Extreme precaution will be taken to avoid spillage or leakage of diesel, oils and lubes from construction related vehicles. To reduce the impacts from spills or leaks occur during operation and maintenance of these vehicles will be done only at designated and surfaces in the construction yard. Spills / leaks, if any, will be recovered and disposed according to local standards.
- Pollution control equipment will be made available at the construction sites for addressing potential pollution risks and accidents.
- The camps will be adequately equipped with all the necessary facilities / amenities such as water supply, power supply, wastewater collection, solid waste collection and sanitation.
- The domestic wastes generated from the camps will be disposed at local waste disposal site.

The following table provides environmental mitigation measures for all relevant components identified that may have an impact on either natural or socio-economic environment. It was provided an indication of the duration and magnitude of impacts and specific institutional responsibility for construction phase of the project.

Table 1: Possible Environmental impacts and mitigation measures

Potential Impacts	Mitigation measures	Location	Impact intensity	Implementing agency	Supervising agency
Waste generation from construction activities	Littering, accidental disposal and spillage of any construction wastes should be avoided by pre-planning ways of their transportation and unloading at site. Careful planning of the work	Land and lagoon	Minor to moderate short-term impact	MTCC	PMDSC

	activities can also reduce the amount of waste generated				
Accumulated waste at the construction site and contaminated land	Separate accumulated waste into main fractions and dispose on existing dumpsite Assess risks to the environment and arrange for appropriate treatment, removal or containment as needed	Construction site	Moderate	MTCC	PMDSC
Release of silt	Use silt fences around temporary piles of excavated material Quickly refill excavated areas upon completion of works Avoid excavation during wet weather	Construction site	Moderate	MTCC	PMDSC
Contamination of ground and sea water	Oil /chemical handling and management procedures will be made known to all relevant staff, appropriate supervision Take precaution to avoid spillage or leakage of diesel, oils and lubes from construction vehicles Conduct maintenance of these vehicles only at designated areas in the construction yard Spills / leaks, if any, will be recovered and disposed according to local standards Equip camps with necessary facilities /	Construction site	Moderate	MTCC	PMDSC

	amenities such as water supply, power supply, wastewater collection, solid waste collection and sanitation Domestic wastes generated from the camps will be disposed at local waste disposal site				
Air pollution	Regularly maintain machinery and ensure they meet required emission levels for diesel vehicles.	Air	Minor, Short-term	MTCC	PMDSC
Noise pollution	Avoid use of heavy machinery during night hours	Construction site	Moderate	MTCC	PMDSC
Occupational Health and safety risks	Provision of adequate safety gear to workers such as gloves, face masks, earplugs, boots Appoint health and safety officer to ensure regular briefing of construction workers on health and safety issues Maintain a fully equipped first aid kit on the construction site and establish proper links with the nearest medical facility to treat more injuries and sickness. Maintain hygienic environment in construction camp site by providing proper waste management facilities, clean drinking water and proper toilet facilities. Provide proper fencing and signage to ensure public do	Construction site	Moderate	MTCC	PMDSC

	not enter unsafe areas in and around the construction site.				
--	---	--	--	--	--

3. Environmental Management Approach

a. Institutional arrangements

Effective implementation and supervision of the environmental mitigation measures and monitoring activities identified in this document can only be achieved through a suitable institutional mechanism involving stakeholders of the project. A broad institutional mechanism for environment safeguards associated with the project, roles and responsibilities of various agencies and parties for implementing environment safeguards are provided below.

Project Management Consultant (PMC): PMC will monitor implementation of the EMP. Specific responsibilities are:

- Review the detailed design of the project and ensure it includes the least impacts on the local environment and follows recommendations made in the EIA report.
- Conduct monthly site visits to the construction site.
- Review the test results for testing the seawater quality and air quality.
- Review the EMP implementation records of the contractor and crosscheck with the project site conditions.
- Ensure contractors secure necessary permits and clearances on a timely basis.
- Advise the contractor on how to address non-compliances.
- Report the occurrence of any unanticipated impacts and recommend mitigation measures and need for the EIA report to be updated.
- Accordingly advise the contractor on how to address the unanticipated impact.

Contractor: The Contractor is the principal agent to implement the EMP during the pre-construction and construction stage. Specifically, the contractor will:

- Appoint a qualified environment focal person to implement the EMP and monitoring plan.
- Obtain necessary environmental license(s), permits etc. from relevant agencies as prior to commencement of civil works contracts.
- Implement all mitigation measures in the EMP and activities in the Monitoring Plan.

- Ensure compliance with environmental statutory requirements and contractual obligations.
- Respond promptly to grievances raised by the local community or any stakeholder and implement environmental corrective actions or additional environmental mitigation measures as necessary.
- Based on the results of EMP monitoring, implement environmental corrective actions and corrective action plans, as necessary.

b. Environmental Responsibilities

i. Project Manager

Mohamed Khalid, mohamed.khalid@mtcc.com.mv

Responsibilities:

- Promote and implement the policies at workplace
- Resolve complaints and issues that may arise in the workplace
- Implement any corrective or preventative actions stated in safeguards monitoring reports

ii. Environmental, safety and community liaison officer

Environmental officer: Mamdhoo Ali, mamdhoo.ali@mtcc.com.mv

Responsibilities:

- Provide environmental training and awareness to all staff
- Ensure the implementation of the EMP

Safety and community liaison officer: Saaif Mohamed Saleem,

saaif.mohamed@mtcc.com.mv

Responsibilities:

- brief all staff on health and safety measures
- ensure all staff are equipped with and using appropriate safety gear while working
- receive complaints/grievances from the public, immediately implements the remedial measures and reports to the PMU and PMDSC

iii. Site Engineer

Krishan Santhanathanasan, krishan.s@mtcc.com.mv

Responsibilities:

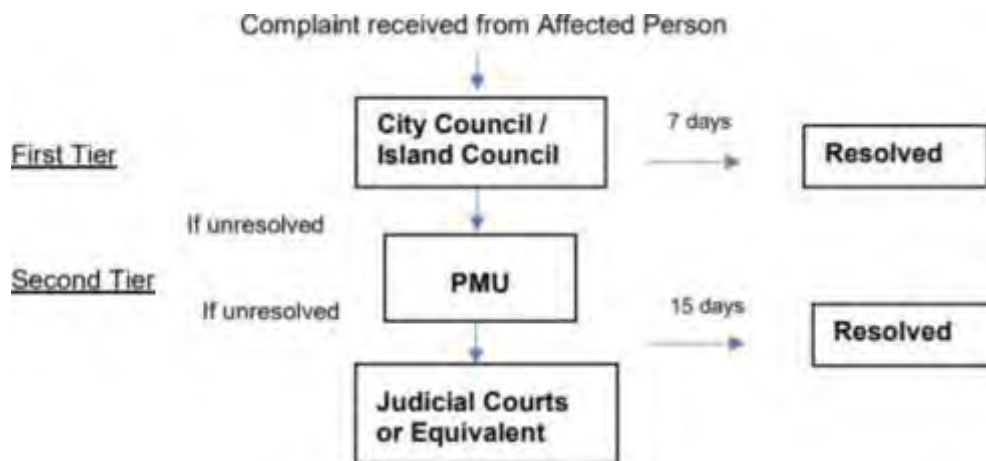
- Comply with the CEMP

c. Grievance Redress Mechanism

A grievance redress mechanism (GRM) will be established to receive and facilitate the resolution of affected persons concerns, complaints, and grievances on negotiated/voluntary land donation or involuntary land acquisition, relocation, income restoration, environmental management and other construction and operation related issues. The GRM is accessible to all affected persons

GRM diagram for complaints resolution:

Figure 1: GRM diagram



4. Environmental monitoring plan

a. Monitoring

Monitoring is the systematic collection of information over a long period of time. It involves the measuring and recording of environmental variables associated with the development impacts.

Monitoring is needed to;

- Compare predicted and actual impacts
- Assess the effectiveness of mitigation measures
- Obtain information about responses of receptors to impacts
- Enforce and ensure legal standards and requirements set with project approval
- Prevent and take remedial measures for negative environmental issues resulting from inaccurate predictions
- Minimize errors in future assessments and impact predictions
- Make future assessments more efficient

- Provide information environmentally responsible project management
- Improve EMP and monitoring process

Impact and mitigation monitoring are carried out to compare predicted and actual impacts occurring from project activities to determine the efficiency of the mitigation measures. This type of monitoring is targeted at assessing project related impacts on the natural, social and economic impact natural resources and dependent communities that are likely to affect due to implementation of the project.

Table 2: Annual monitoring schedule during construction

Attribute	Indicators	Method	Frequency
Air quality	SO ₂ , NO ₂ , PM ₁₀ , PM _{2.5} , O ₃	On site testing/Lab analysis	Monthly
Water quality	BOD, TSS, TPH, fecal coliform/enterococci, Pb, Cu, Cd, Hg, Cr	On site testing/Lab analysis	Monthly
Noise	Noise levels, complaints	Noise meters	Monthly
Direct effects on island residents from impacts such as accidental damage, dust generation, noise generation and safety	Complaints, records relating to pollution and health and safety incidents	Community feedback, Grievance redress mechanism	Daily

b. Reporting requirements

i. Monitoring report format

Monitoring reporting and format will follow the schedule and report structure shown in Environmental Impact Assessment Guidelines by EPA.

The following Monitoring Report Format will be followed.

ii. Summary of monitoring report

- Title, date, Consultant
- Summary of parameters measures, methods, equipment, location, and frequency
- Highlight and discuss any unusual and/or significant results that may be of concern based on the IEE/EIA report

iii. Final monitoring report

- Title, date, Consultant
- An executive summary
- Basic information on the project
- Drawing/plans as appropriate showing the project area, any environment sensitive receivers and the location of the monitoring and control stations
- Discussion on the implementation of the mitigation measures and pollution control measures
- Parameters monitored, methodology used, environment quality performance/standards limit
- Monitoring results including date, time, frequency, and duration
- Presentation of monitored parameters (graphical plots and trends)
- Constrains and any factors which might have affected the monitoring results
- A summary of non-compliance of the environmental quality performance limits and discussion of their implications
- Description of the actions taken in the event of non-compliance
- A summary record of all complaints received (written or verbal) for each media, including locations and nature of complaints, liaison and consultation undertaken, actions and follow-up procedures taken
- A forecast of the works program, impact prediction and monitoring schedule for the remainder of the project
- Comments, recommendations, and conclusions for the monitoring period.

5. Emergency response

Emergency response plan

Project:

Site:

Date of Assessment:

Completed by:

Potential Emergencies	The Following area identified as potential emergencies		
Emergency Procedures	If an emergency (identified above) occurs, these steps need to be taken by the assigned personnel;		
Location of Emergency Equipment	Emergency equipment is located at:		
	Fire Alarm:		
	Fire Extinguisher:		
	Fire Hose:		
	Panic Button:		
	Other:		
Emergency Response Equipment Training & Requirements	Name:	Training Received:	Frequency:
Locations and use of Emergency Facilities	The Nearest Emergency services are located at		
	Fire Station		
	Ambulance		
	Police		
	Hospital		
	Other:		
Fire Protection Requirements	Fire protection equipment listed below can be accessed by trained personnel at the following locations:		

Alarm and Emergency Communication Requirements	
First Aid	First Aid Kit Type:
	Location
	Other Supplies:
	First Aider are:
	Workstations & Shift:
	Transportation Arrangements
Procedures for Rescue and Evacuation	
Designated Rescue and Evacuation Workers	The Following workers area trained in rescue and evacuation: (Name and Area of Expertise)

ANNEX

Accident Reporting Form

EMPLOYEE DETAILS

Name: _____ Position: _____

Address: _____

INJURY DETAILS

Date of accident: _____ Time: _____ Date Reported: _____ Time: _____

Date ceased work: _____ Time: _____ Supervisor: _____

Time lost (to date): _____ Time lost (anticipated overall) _____

Medical Treatment required:

Nature and extent of injury

Part of body injured	☐ Head	☐ Trunk	☐ Multiple
	☐ Eyes	☐ Arm	☐ General
	☐ Neck	☐ Leg	☐ Unspecified

Nature of injury	☐ Sprain	☐ Laceration	☐ Burn
	☐ Fracture	☐ Concussion	☐ Superficial
	☐ Multiple	☐ Dislocation	☐ Amputation
	☐ Contusion	☐ Other	

Type of incident	☐ Flying object	☐ Manual handling	☐ Electricity
	☐ Struck by	☐ Poisons	☐ Fall
	☐ Caught in	☐ Temperature	☐ Other

Describe the events leading up to the injury and how the injury occurred (witness or injured person's statement).

Toolbox Talk Form

DATE _____ LOCATION _____ SUPERVISOR _____

NAME	SIGNATURE	NAME	SIGNATURE
1.		2.....	
3.		4.....	
5.		6.....	
7.		8.....	
9.		10.....	
11.....		12.....	
13.....		14.....	
15.....		16.....	

[illegible]

CONSTRUCTION SAFETY INSPECTION CHECKLIST			
Date:		Ref No.(s):	
Location:		No of Workers:	
Safety Officer:			
A – Acceptable U - Unacceptable ITEM COMMENTS/CORRECTIVE ACTION			
Housekeeping (Garbage, cleanliness, electrical cords, ladders)			
Drinking water/ sanitation requirements/first aid kit			
Electrical (such as proper grounding, lock & tag and GFCI [good condition, inspected])			
Proper personal protective equipment (PPE)			
Walking/working surfaces (tripping hazards, slippery surfaces, floor holes)			
Electrical tools (guards in place; good condition, stored properly)			
Lighting (for example: Insufficient illumination for the activity being undertaken)			
Dredging/ Reclamation (properly sloped or shored with bunds)			
Flammables/combustibles (fire extinguishers, welding and cutting equipment)			
Hot work (PPE, permit, combustibles, flammables protected)			
MSDS's onsite with containers labeled			
Scaffold system fully assembled; tags; inspections; fully planked guardrails			
Proper barricading/ warning signs (trenches, fuel areas, storage construction sites)			
Fire extinguishers (monthly inspection, accessible, on mechanized equipment)			
COMMENTS:			

OCCUPATIONAL HEALTH & SAFETY PLAN

K.Thilafushi Harbour Rehabilitation Project



Maldives Transport & Contracting Company
Construction & Dredging Division

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OCCUPATIONAL HEALTH AND SAFETY PLAN

K.Thilafushi Harbour Rehabilitation Project

1 Project Details

This document sets out the safety management plan to be adopted by MTCC as the principal contractor for works undertaken at K.Thilafushi from 15 Feb 2020 to 8 June 2021.

Contact Details:

Name of Company: Maldives Transport and Contracting Company PLC

Head Office Address: Tokyo Villa, MTCC Tower, 6th Floor

Phone: +(960) 332 6822

Fax: +(960) 333 2835

Email: info@mtcc.com.mv

Chief Risk Officer (CRO): Ahmed Latheef

Project Manager: Mohamed Khalid (+960 3001180)

Project Coordinator / Safety Liaison Officer: Saaif Mohamed (+960 7845139)

Site Engineer: Krishan Santhanathanasan (+960 9925965)

Site Address: K.Thilafushi

2 Safety Policy

At MTCC, the Occupational Health and Safety (OHS) is founded on the belief that the well-being of people employed at our workplace or visiting our workplace is a major priority and must be considered during all work performance. Visitors and members of the public shall be given equal priority to that of our workers.

The principal objectives of our Safety Policy are:

- To achieve an accident free workplace.
- To make health & safety a key part of every supervisory position.
- To ensure health & safety is considered in all planning and work processes.
- To consult with our workers on a regular basis on safety issues.
- To provide ongoing training and education to ensure that our employees work in the safest possible manner.
- To identify, assess, eliminate or control all potential hazards in the workplace through regular risk assessments and site safety inspections.
- To take a proactive approach to trying to identify potential accidents/incidents before they happen.
- To provide effective injury management and rehabilitation for all employees.

The success of our health & safety management is dependent on:

1. The pro-active identification of hazards for all work activities via a Risk Assessment and the adoption of Safe Work Method Statements to control risks that cannot be eliminated.
2. Ensuring all workers have read, understood and signed their Safe Work Method Statements (where applicable) prior to commencing work.
3. Ensuring the work team is totally committed to achieving our Occupational Health and Safety objectives.
4. Ensuring that open and honest communication exists between management and all employees.

3 Key Roles and Responsibilities

MTCC will ensure that health and safety forms' an integral part of every manager and supervisors' position. The key roles and responsibilities of our managers and supervisors, regarding safety on site are outlined below.

3.1 Chief Risk Officer

Chief Risk Officer (CRO) is responsible for OHS on all MTCC projects and their duties include:

- Defining the OHS responsibilities for key position holders in the organization
- Implementing the company OHS procedures
- Managing compliance with OHS legislation, regulations, standards and codes
- Ensuring all staff are adequately trained in OHS

3.2 Project Manager

Project Manager is responsible for OHS on site including:

- Undertaking a Risk Assessment of all major activities prior to work commencing on site and determining which activities require Safe Work Method Statements to be developed by either MTCC or a Sub-contractor.
- Developing site specific safety plans and safety rules.
- Identifying safety training needs for MTCC employees.
- Ensuring the workplace abides with OHS legislative requirements.
- Disseminating OHS information to personnel.
- Ensuring safe equipment and plant is provided and maintained.
- Facilitating an agreed method of consultation with employees.
- Investigating all accidents and ensuring that corrective actions are undertaken.
- Reviewing Safe Work Method Statements issued by sub-contractors.
- Assessing of subcontractors' abilities to comply with corrective and/or preventative control measures.
- Developing and implementing emergency procedures.
- Stimulating a high level of safety awareness at all times.
- Preparing and participating in safety meetings and safety programs.
- Reporting all accidents/incidents/near misses to the CRO.
- Ensuring the Site Supervisor and Site Supervisors are trained in OHS and are aware of their responsibilities as outlined below.
- Ensuring valid certificates of currency (for Workers Compensation) are provided by all subcontractors prior to commencing work on site.
- Supporting and assisting with the rehabilitation of employees who have been injured at work, by encouraging their early return to normality through work-based rehabilitation programs.

3.3 Site Supervisor

Site Supervisor is responsible for OHS on site including:

- Leading by example and promoting OHS at every opportunity.
- Insisting on correct and safe work practices at all times.
- Assisting the Project Manager and/or Subcontractors in the identification and preparation of safe work procedures.
- Monitoring employees and contractor's compliance with safe work methods (controls) and the site safety rules.
- Providing advice and assistance on OHS to all workers on site.
- Assisting the Project Manager in identifying employees that require OHS training.
- Assisting the Project Manager in ensuring current OHS and other relevant legislative requirements are met in the workplace.
- Carrying out regular site safety inspections and ensuring that any corrective actions identified are actioned in the required time frame.
- Completing accident and hazard reports as required.
- Conducting site inductions, toolbox talks and team briefings (as required).
- Ensuring all plant and equipment on site is maintained in a safe condition, with guards and safety devices in place.
- Maintaining an up to date OHS Site Plan, including all Registers (Electrical, Hazardous Substances, etc)
- Supervising and ensuring compliance with safe work procedures.
- Undertaking regular inspections of Plant and Equipment, ensuring they are maintained in a safe condition with guards and safety devices in place.
- Stimulating a high level of safety awareness at all times and encouraging input from people on matters relating to safe work processes and health and safety.
- Communicating safety performance to the Site Supervisor.
- Ensuring First Aid is readily available to all persons under their supervision and that any staff requiring First Aid treatment completes the Injury Register

4 Risk Management

4.1 Risk Assessment

MTCC will identify the potential hazards of all proposed work, assess the risks involved with the work and will develop controls to eliminate, or minimise, the risk. These controls must be reviewed and monitored by MTCC on a regular basis. Risk Assessments will be undertaken on all activities that follow the sequence of construction, as well as on any plant and hazardous substances likely to be used or found in the workplace.

The Project Manager will use Form 4.1 to undertake an initial Risk Assessment prior to work commencing on site. Project Manager is to review all Safe Work Method Statements (SWMS) produced by subcontractors prior to allowing them to commence work on site.

4.2 Site Safety Inspections

Ongoing Risk Assessments (after the job commences) are to be undertaken by the Site Supervisor/Project Manager utilising the Site Safety Inspection Form 4.2. Site Safety Inspections should be conducted on a quarterly basis by either the Site Supervisor and/or OHS Committee/Representatives (where they exist).

Follow up checks

The Project Manager and/or Site Supervisor are to ensure that all hazards identified during the Site Safety Inspection (Form 4.2) are rectified ASAP.

4.3 Risk Classification

For each potential workplace hazard identified, a Risk Class will be determined by referring to the categories below:

Class 1: (High Risk): Does the hazard have the potential to kill, or permanently disable you?

Class 2: (Medium Risk): Does the hazard have the potential to cause a serious injury, or illness, which will temporarily disable you?

Class 3: (Low Risk): Does the hazard have the potential to cause a minor injury which would not disable you?

* The higher the Risk Class, the more extensive the controls to be provided

Risk Assessment (Form 4.1)						
Project:			Date:		Completed by:	
Major Work Activity	Potential Hazards Associated with each Activity	Risk Class (See Below)	SWMS Required by:		SWMS Filing	SWMS Compliance Check
			Principal Contractor to produce? (Y/N)	Subcontractor to produce? (Y/N)		

Class 1 (High Risk) – Does the hazard have the potential to kill or permanently disable you?

Class 2 (Medium Risk) – Does the hazard have the potential to cause a serious injury, or illness, which will temporarily disable you?

Class 3 (Low Risk) – Does the hazard have the potential to cause a minor injury which would not disable you?

Site Safety Inspection (Form 4.2)					
Project:		Date:		Completed by:	
				Follow-up Checked by:	
Serial	Location	Unsafe Condition/Activity	Risk Class (See Below)	Corrective Action (to rectify Unsafe Condition/Activity)	Follow up Check

Class 1 (High Risk) – Does the hazard have the potential to kill or permanently disable you?

Class 2 (Medium Risk) – Does the hazard have the potential to cause a serious injury, or illness, which will temporarily disable you?

Class 3 (Low Risk) – Does the hazard have the potential to cause a minor injury which would not disable you?

5 Hazard Reporting & Hazardous Substances

5.1 Hazard Reporting Procedure

MTCC will encourage all workers to Repair, Remove or Report hazards immediately. All workers are to be informed during site induction that hazards can be reported verbally to either the Site Supervisor or any OHS Representative or OHS Committee member (where they exist). All hazards brought to the Site Supervisors attention are to be recorded on the Hazard Reporting Log (Form 5.1). The Site Supervisor will investigate all reported hazards and where necessary, either eliminate or control the hazard. Where this cannot be done immediately, corrective action is to be documented on Form 5.1 and followed through within the appropriate time frames.

MTCC's Project Manager is to ensure that all OHS Representatives and/or OHS Committee members have been trained to complete the Hazard Report Log.

5.2 Company Time Frames for Correcting Hazards

Risk Rating	Time Frame for Corrective Action
Class 1 (High Risk Hazards)	Immediately!
Class 2 (Medium Risk Hazards)	Within 24 hours
Class 3 (Low Risk Hazards)	Within 1 week

Corrective actions will be signed off when completed. The Project Manager is to ensure that corrective action is undertaken within the appropriate time frames.

5.3 Hazardous Substances

The Site Supervisor is responsible for ensuring no hazardous substances are brought onto the site without a Material Safety Data Sheet (MSDS) being lodged and the substances details recorded in the Hazardous Substance Register (Form 5.2). Subcontractors are to list in their Safe Work Method Statements all hazardous substances they intend to use on site and provide a copy of the relevant MSDS.

MTCC will ensure the following additional rules regarding the use and storage of hazardous substances on site are covered during site induction and adhered to on site by all employees and contractors.

- All hazardous substances are to be stored and used in accordance with the relevant MSDS.
- All hazardous substances are to be stored in their original containers with a readable intact label in place at all times.
- All hazardous substances can only be stored in a location designated by MTCC.
- All workers must be provided with adequate information, training and Personal Protective Equipment (PPE) prior to working with any hazardous substances on site.

Hazard Report Log (Form 5.1)							
Serial	Date	Unsafe Condition/ Activity Reported	By Whom	Risk Class	Recommended Corrective Action	Date Rectified	By Whom

Class 1 (High Risk) – Does the hazard have the potential to kill or permanently disable you?

Class 2 (Medium Risk) – Does the hazard have the potential to cause a serious injury, or illness, which will temporarily disable you?

Class 3 (Low Risk) – Does the hazard have the potential to cause a minor injury which would not disable you?

Hazardous Substances Register

(Form 5.2)

Product Name	Principal User	Type of Application	Qty onsite	Storage location on site	Is the MSDS available? (Y/N)	Risk Class	Controls Required? (PPE etc)

Class 1 (High Risk) – Does the hazard have the potential to kill or permanently disable you?

Class 2 (Medium Risk) – Does the hazard have the potential to cause a serious injury, or illness, which will temporarily disable you?

Class 3 (Low Risk) – Does the hazard have the potential to cause a minor injury which would not disable you?

6 Safe Work Method Statement

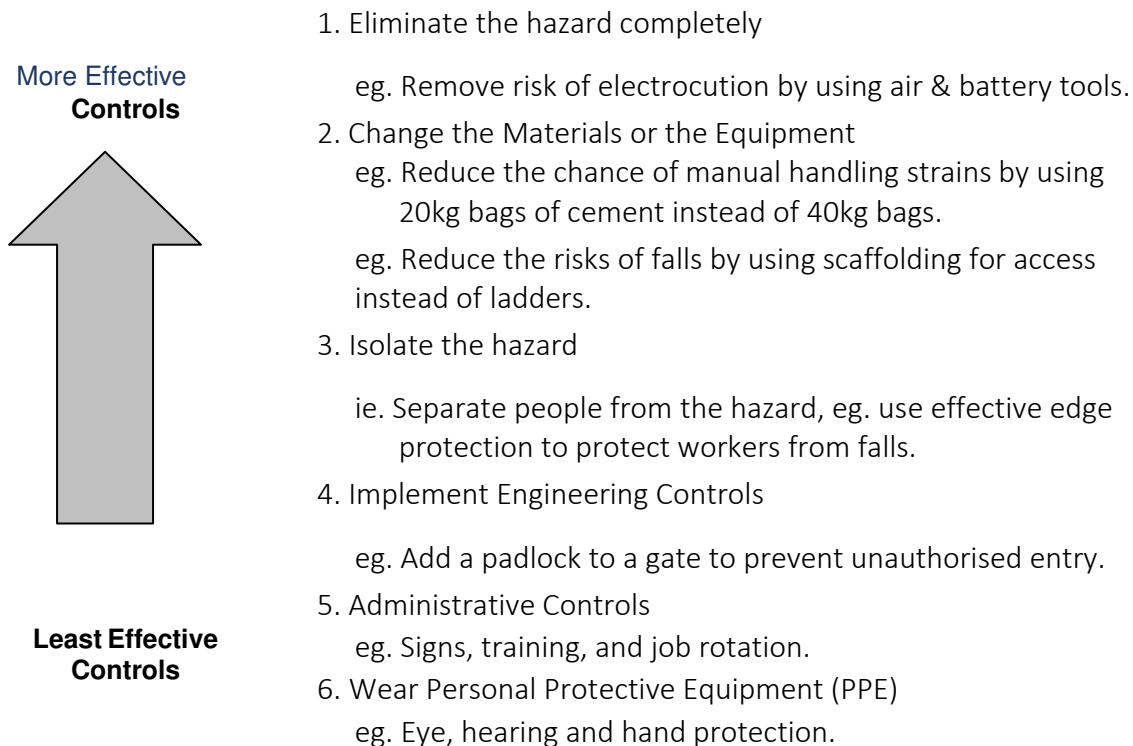
6.1 Procedure

A Safe Work Method Statement (SWMS) breaks a work activity into logical steps and lists the typical hazards associated with each of these job steps, the risk (likelihood and consequence) of each occurring and records how to eliminate or control the risk to the workers safety. MTCC will use the SWMS Proforma enclosed as Form 6.1.

SWMS's should be produced by the sub-contractor undertaking the work, where possible, however where this does not occur, using Form 6.1 MTCC will be required to develop a SWMS in consultation with the subcontractor.

A copy of all completed SWMS, from subcontractors as well as for MTCC's employees, will be kept in this OHS Plan.

6.2 Hierarchy of Risk Controls



* In some cases, a combination of control measures may need to be used.

6.3 Evaluation of SWMS

MTCC's Project Manager is responsible for reviewing all generic Safe Work Method Statements submitted by subcontractors at tender. Where job steps or site conditions change from those planned, the Project Manager is responsible for ensuring all SWMS are updated (ie. made site specific) prior to work commencing on site.

When reviewing SWMS, the Controls identified should be as high as practical in the "Hierarchy of Risk Controls" guide shown in section 6.2 above.

Where practicable, MTCC and its subcontractors will use Form 6.1 as a template for the development of SWMS. The Project Manager is to ensure all of the following is covered in Subcontractor's SWMS:

- The project name and the name of the Subcontractor?
- A description of the work activity or task to be undertaken?
- The date the SWMS was developed.
- The name and signature of the person who developed the SWMS?
- The job steps involved in doing the work?
- The potential hazards associated with each job step?
- The Risk Class for each Hazard?
- The controls to be used to either eliminate or minimise the potential hazards identified?
(Check they are as high as possible on the 'Hierarchy of Risk Controls').
- The name of the person(s) responsible for ensuring that the control(s) are in place?
- Number of employees required to safely undertake the work?
- Occupations/Trades/Skills of workers undertaking the work?
- Qualifications/Licenses of workers required to undertake the work?
- Training completed or required by workers to undertake the work?
- List of all Plant (static and mobile) to be used on site and details of the frequency of maintenance checks?
- List of all equipment (power tools, electrical leads etc) to be used on site and details of the frequency of maintenance checks?
- List of all Personal Protective Equipment (PPE) required for the task?
- List of all hazardous substances they intend using with relevant MSDS attached?
- A section that records the names and signatures of all employees that will need to follow the SWMS? (Also known as a 'Signoff' of the SWMS.)

* In addition to the above, the Project Manager must ensure that all hazards identified in the Risk Assessment (using Form 4.1 from Section Four of this OHS Plan) have been identified within the sub-contractors SWMS.

SAFE WORK METHOD STATEMENT (SWMS) (Form 6.1)			
[Person Conducting a Business or Undertaking (PCBU) name, Office and phone]		Principal contractor (PC)	[Name, Office address]
Work activity	[Job description]	Work location	
High risk construction work	• • • •	Works manager	
		Contact phone	
		Have workers been consulted about the SWMS?	
Person responsible for ensuring compliance with SWMS		Date SWMS provided to PC	
Person(s) responsible for reviewing the SWMS		Last SWMS review date	
Date received		Signature	
Workers name		Date received	
Workers signature			

What are the tasks involved?	What are the hazards and risks? (What is the problem?)	What are the control measures? (Describe the control measures and how they will be used)
Think about the workplace and each stage of the work, including preparation and clean-up.		
	Identify the hazards and risks that may cause harm to workers or the public.	Describe what will be done to control the risk. What will you do to make the activity as safe as possible?

6.4 Monitoring of SWMS

MTCC Site Supervisor is responsible for ensuring that all employees and subcontractors have read and understood their relevant SWMS prior to commencing work on site. The Site Supervisor is also responsible for conducting regular reviews of SWMS whilst work takes place on site to ensure employees and subcontractors are adhering to the risk controls identified in their SWMS.

7 OHS Induction

7.1 Procedure

MTCC will ensure nobody commences work on site until the following is confirmed:

1. They have completed the OHS General Induction Course for Construction Work
2. They have received an OHS Work Activity induction (including understanding and signing off on Safe Work Method Statements); and
3. They complete a Site Specific OHS Induction (including understanding and signing off on the company's Site Safety Rules).

7.2 Induction Record

All workers must meet the above three minimum OHS induction training requirements before they can commence work on site. The Site Supervisor is to ensure that all workers intending to work on site have met these requirements via the completion of an Individual Induction Record (Form 7.1) and the Induction Register (Form 7.2).

7.3 Site Safety Rules

MTCC's Project Manager and Site Supervisor are to communicate prior to the project commencing to produce Site specific Safety Rules (ie. review and update Forms 7.3 and 7.4 respectively). The Safety rules specific to this project are contained in Form 7.3.

7.4 Site Induction Agenda

All Site Inductions are to be carried out in accordance with the Site Induction Agenda contained at Form 7.4.

MTCC employees that have been trained and authorised to give Site Inductions on this site are:

Name	Position

Induction Record
(Form 7.1)

Project Name : K.Thilafushi Harbour Rehabilitation Project

Employee Details

Name: _____ Occupation: _____.

Employers Name: Ministry of Environment and Energy

Phone No: _____ Mobile: _____.

Details of Next of Kin

Name: _____ Phone No: _____.

Address: _____.

Medical

Please detail any special medical conditions that you may want us to know about (ie. Diabetes, allergies, medication etc):

Inductions

A. General

OHS General Induction Card No: _____.

B. Work Activity (Certificates of Competency/Licenses/Tickets attached)

Classification: _____ No: _____.

Classification: _____ No: _____.

Relevant SWMS read, understood and signed: ☐ Yes ☐ No (Please tick Yes or No)

* If NO, cannot start work onsite

C. Site Specific Induction

Activity	Signature
Site Specific Hazards & Safety Rules Explained (Form 7.3)	
Emergency and Evacuation Procedures Advised (Form 8.1 & 9.2)	
Company Policy/Procedures Advised (ie. Haz substances/elec etc)	

MTCC Site Induction Number: _____.

I hereby agree to adhere to the policies outlined during the work place induction and will comply with any reasonable instruction given by workplace management or their representatives.

Inductees' Signature: _____ Date: ____/____/____

Site Specific Induction conducted by: _____.

Site Induction Register (Form 7.2)				
Company:MTCC		Project:K.Thilafushi Harbour Rehabilitation Project		
Induction No.	Name	Employer	General Induction Number	Signature
001				
002				
003				
004				
005				
006				
007				
008				
009				
010				
011				
012				
013				
014				
015				
016				
017				
018				
019				
020				

MTCC
Site Safety Rules
(Form 7.3)

It is a condition of working on this site, to observe the following site safety rules:

1. Hard hats to be worn on all building projects at all times.
2. High visibility vests/shirts are to be worn at all times in areas identified by signage.
3. All construction workers are to wear safety boots/shoes.
4. Only trained persons are to operate machinery.
5. No alcohol or drugs are allowed on site.
6. Appropriate PPE must be worn as indicated in Safe Work Method Statements, Material Safety Data Sheets (MSDS) or signage.
7. Report any unsafe conditions or practices to your supervisor or safety representative immediately.
8. Keep your work area clean and free of waste materials.
9. Act safely at all times.
10. Know your emergency and site evacuation procedures.
11. Always refer to the relevant MSDS when using hazardous substances or chemicals.

Site Induction Agenda (Procedure)
(Form 7.4)

1. Introduce yourself.
2. If inducing a subcontractor, ensure they have read and understood their Safe Work Method Statement (SWMS) and signed it to acknowledge they understand it and will abide by the controls identified in the SWMS.
3. If inducing a subcontractor, ensure they have an OHS General Induction Number and if so, have them complete the Induction Record (Form 7.1).
4. Failure to provide a signed SWMS and OHS General Induction Number will result in the induction being terminated until such time as they can comply. They cannot commence work on site.
5. Explain the site entry conditions and the hours of work allowed under the DA or other conditions.
6. Explain briefly what the site details are.
7. Briefly outline company policy details (particularly regarding the use of hazardous substances, plant, equipment, electrical etc).
8. Advise inductee(s) who the First Aiders are and how to contact them.
9. Go through the Emergency Procedures for both minor and major accidents.
10. Explain the Evacuation Procedure.
11. Point out using the site plan where the first aid and emergency meeting points are.
12. Explain the Site Safety Rules.
13. Inform them of any major hazards close to or surrounding their worksite.
14. Read out the consultative arrangements for issue resolution (if they exist).
15. Identify the traffic and environmental management plans (if applicable).
16. Make them aware of any unusual site specific issues/hazards they should know about.

8 Incident Management

8.1 Emergency Response Procedure(s)

MTCC Emergency Response Procedures (ERP's) for Accidents are detailed on Form 8.1. The Evacuation Plan for this site is detailed on Form 8.2. Both these forms are to be made site specific by the Project Manager and then displayed in a prominent place for all workers to see. Depending on the site, additional ERP's may be required (ie. for confined spaces, working over water etc).

8.2 First Aid

The First-Aid box location(s) is next to site office.

The First Aid room is located at next to site office (if applicable).

8.3 Injury Reporting

All injuries will be reported to the Site Supervisor or a First Aid Officer as listed above. Injuries will be recorded in the Site Injury Register (Form 8.3 or its equivalent). These records must be kept for a minimum of 5 years.

All fatalities or serious injuries (ie. injuries likely to result in an absence from the workplace of 7 days or more, loss of consciousness, trapped in machinery etc) and their circumstances must be reported to Project Manager immediately by phone and in writing within 7days via email.

Serious Near Miss Incidents with no injury or illness but that are immediately life threatening must also be notified to Project Manager immediately and in writing within 7 days via email.

8.4 Accident Investigation(s)

MTCC will investigate all accidents and near miss incidents by close of business on the day in which they occur.

Investigations will be recorded on the Accident Investigation Form 8.4 or its equivalent.

Accidents/Incidents will be recorded by Site Supervisor.

Accidents/Incidents will be investigated by Health & Safety Inspector.

Accidents/Incidents will be reported to Project Manager by Site Supervisor.

MTCC
Emergency Response Procedures (Accidents/Fire)
(Form 8.1)

Emergency Numbers

In the event of an emergency, the following telephone numbers apply:

Contact	Phone Number
Site	
Site Phone	
Project Manager	+960 3001180
Site Engineer	+960 7284155
Emergency Services	
Ambulance	102
Nearest Hospital	IGMH +960 3335335
Fire	118
Police	119
<i>Nearest Police Station</i>	K.Thilafushi Police Station
<i>Other</i>	
Electricity	STELCO +960 3327036
Water	MWSC +960 3323209 Emergency: 105

Site Address

Site Address: K.Thilafushi WAMCO Site, newly reclaimed land
Specific Entry Point: North corner of the site, South-West of the new quay wall

1. In case of serious accident/emergency:

- Attract assistance and if someone is injured, call for the First Aid Officer.
- Contact Site Supervisor who will coordinate Emergency Response, otherwise call Emergency number and inform them of the service required (Police/Fire/Ambulance).
- Provide address details as above and arrange to have someone meet the Emergency Services at the Site Entrance.
- If there is a fire, use the Fire Extinguishers to try and contain fire, if safe to do so.
- Stay with injured person(s) until help arrives. Do not move the injured person(s) unless there is a higher risk of them being injured.
- If necessary, commence evacuation as per the Evacuation procedure.

MTCC
Site Evacuation Plan
(Form 8.2)

All staff to be familiar with the evacuation route & assembly area of the site upon being assigned to site.



MTCC Injury Register (Form 8.3)		
WORKERS DETAILS		
Surname:	First Name:	Sex (M/F):
Home Address:		
Phone (Work):	Mobile:	
Occupation:	Date of Birth:	
EMPLOYER DETAILS		
Business Name: Maldives Transport and Contracting Company		
Business Address: MTCC Tower, 6th Floor, Boduthakurufaanu Magu, Male'		Postcode: 20057
Business Phone: +(960) 332 6822		Business Fax: +(960) 333 2835
Contact Person: Project Manager	Phone: +960 3001180	Mobile:
ACCIDENT/INCIDENT DETAILS		
Date of Injury:	Time of Injury:	Date Employer notified:
Has the person ceased work?	No. Days Likely to be off work?	
Current location of injured worker (home, hospital etc)?		
Treating Doctor:	Phone:	Fax:
How did the injury occur and what was the worker doing at the time?		
Describe the workers injury (e.g. fracture, sprain, cut etc):		
Part of body injured?		
FOLLOW-UP ACTION		
Treatment given/Action taken:		
Accident Investigation undertaken?	Project Manager notified?	Insurer notified?
Name of person completing this form:	Position:	Phone:
Signature:	Date:	

OCCUPATIONAL HEALTH AND SAFETY POLICY CONSTRUCTION WORK SITES

1 Introduction

This policy is focused on physical construction work sites outside the head office. These includes and are not limited to, Dredging & Reclamation sites, Road development sites, Harbour work related sites, etc. If any work is subcontracted to a party, they must adhere to this policy as well.

MTCC strives to achieve a work environment with zero accidents with a comfortable work environment by eliminating possible hazards from the construction sites. Occupational health and safety (OHS) involve all levels of the company from management level to all staff and visitors that may come on to the construction site. OHS is a fundamental responsibility of all site responsible supervisors. However, each level of staff in MTCC is accountable for the safety of their work environment. It is an active process of accident prevention that needs to be followed diligently.

This policy is to be taken seriously and complied strictly. Failure to comply with this policy can result in disciplinary action taken against the responsible personnel or subcontractor. It is a joint effort to ensure an accident free project completion.

2 Scope and objectives

2.1 Scope

This policy applies to all MTCC employees, subcontractors, employer representatives and visitors at all MTCC sites.

2.2 Objectives

- Continuously review and improve the safety performance
- Strive to uphold the core values of safety, knowledge, integrity and leadership in order to achieve its goal of zero harm to people, equipment and the environment
- Complete every project with zero accidents
- Provide and improve safe work conditions
 - o Provide safety representative to perform safety tasks within the site
 - o Comply with any applicable health and safety laws, regulations, standards and codes of practice
 - o Provide safe plant and equipment
 - o Implement risk and hazard management systems which are relevant and suitable for the organizations risk exposure, identify and promote continuously improve health and safety performance
 - o Provide appropriate health and safety training and Personal Protective Equipment (PPE) to all relevant personnel

- Maintain relevant policies, procedures, systems, information, training, recognition programs, and organizational structures to support and communicate effective health and safety practices throughout MTCC work sites
- Consult with working staff to improve safety
- Establish clear targets and objectives regularly to improve health and safety in the workplace
- Establish a process that ensures the distribution of health and safety information to all employees
- Encourage active participation, consultation and cooperation of all employees, contractors and visitors in promoting and developing measures to improve health and safety at work
- Respond and investigate all incidents, and ensure any injured persons are returned to suitable work at the earliest possible opportunity through equitable claims management and rehabilitation practices
- Maintain an awareness of mental health issues and accessing current and relevant training to identify and assist the best outcomes for workers

2.3 Responsibilities

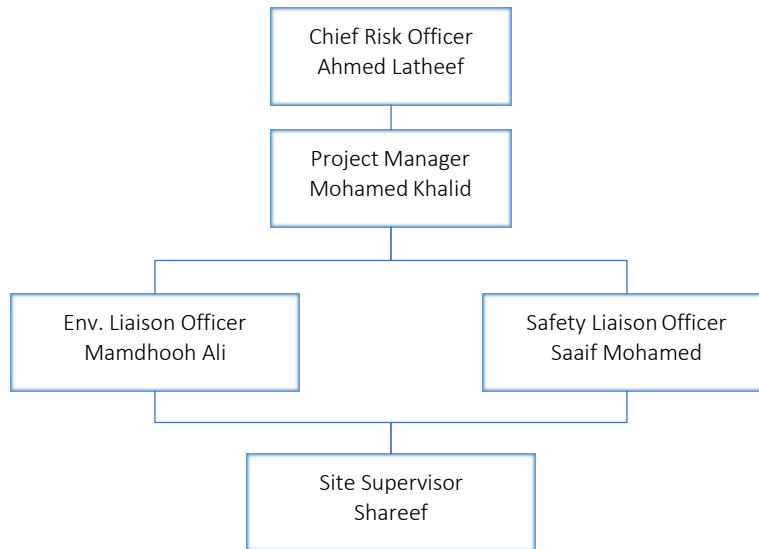
All managers and safety officer remain directly responsible and accountable for the health, safety and welfare of all. MTCC is responsible for providing adequate resources to assist in this cause.

MTCC managers, sub-contractors, Employer's representatives and visitors all have a duty of care including:

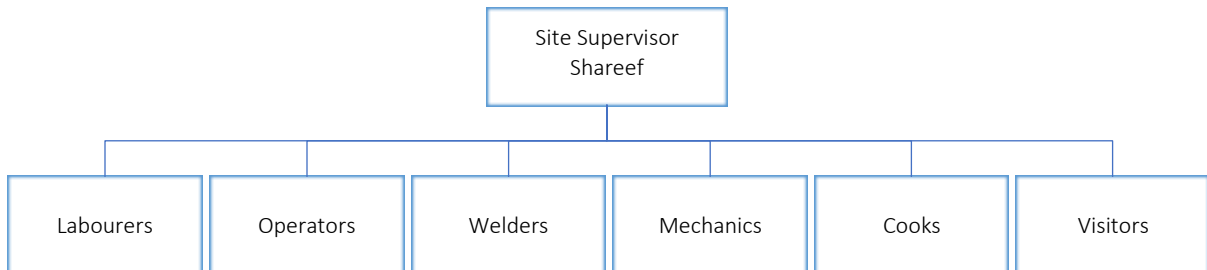
- The responsibility to work safely and voice concerns if they see any potential hazards
- To take all reasonable care for their own health and safety
- To consider the health and safety of other people who may be affected by their actions

3 Safety Organization Chart

3.1 Company Safety Organization Chart



3.2 Site Safety Organization Chart



3.3 Roles and Responsibilities of Health and Safety personnel

3.3.1 Chief Risk Officer

- Responsible for overall safety and risk management of the company
- Set policy to be followed by the company
- Recognize and mitigate new threats and risks to the company

3.3.2 Project Manager / Safety Liaison Officer

- Administers all aspects of the occupational health and safety program
- Develops programs and technical guidance to identify and remove physical, chemical and biological hazards from facilities, operations and sites
- Assist management and supervisors in the health and safety training of employees

- Conducts inspections to identify unhealthy or unsafe conditions or work practices. Document written inspections report
- Recommends programs and activities that will develop and maintain incentives for and motivation of employees in health and safety
- Maintain the state health and safety poster, emergency telephone numbers and other notices required by this policy. Ensure this information is posted in places where employees can see them on each job.
- Develop and maintain accident and incident investigation and reporting procedures and systems. Investigate all accidents and takes action to eliminate accident causes. Reportable incidents consist of fatalities, lost workday cases, and without lost workdays requiring medical treatment. Keep management informed of findings.
- Familiarize with policy regarding the area of responsibility
- Direct and coordinate OHS activities within area of responsibility
- Ensure arrangements for prompt medical attention in case of serious injury to be provided for each job, that includes transportation, communication and emergency numbers.
- Ensure all subcontractor personnel complies with this policy

3.3.3 Site Supervisor

- Ensure all employees use the Personal Protective Equipment (PPE)
- Ensure that safety equipment is available, maintained, used and stored correctly
- Instruct and train all persons within area of responsibility regarding OHS requirements
- Conduct frequent and regular health and safety inspections of work area and direct corrections of unsafe conditions
- Conduct weekly safety briefings with all supervisors and/or workers
- Ensure that staff are aware of and comply with this policy
- Review all accidents/incidents with staff and workers involved, and ensure corrective action is taken immediately to eliminate the cause of the accident
- Maintain injury log

3.3.4 First Line Employees / Subcontractors

- Familiarize with the OHS policy
- Ensure PPE is available, and use at all required times
- Ensure that all injuries are reported and treated properly immediately
- Notify supervisor of any unsafe work conditions, acts, accidents and injuries, immediately

3.3.5 Human Resource Department

- HR to be advised of all accidents resulting in injuries to staff, and coordinate appropriate injury management programs where applicable

4 Safety Meeting / Training / awareness

4.1 Safety Meeting

Safety meetings are to be held based on a schedule. The frequency of these meetings can vary depending on site work and conditions. A safety meeting should be held at least once every month. Site supervisor should keep a log of safety meetings with the participants and items covered in the meeting.

4.2 Safety Training

Safety training should be provided to all staff working on a site at the beginning of project. This training should be documented and is mandatory for all new staff and is highly recommended for existing staff.

Safety training should include the correct use of PPE, site layout and exit routes in case of emergency, risks associated with tools, machinery and vehicles on site, working at height, welding works and other work-related environments applicable on site.

4.3 Toolbox Talks

All staff to be familiarized with the toolbox talk procedure. All toolbox talks to be documented as per Appendix 02 and necessary actions to be taken as soon as possible.

4.4 Induction Procedure

MTCC will provide adequate information, instruction and training to all its employees upon commencement of work (including transferring between departments).

4.4.1 OBJECTIVE

It is the MTCC's objective to ensure employers have the required level of competency to undertake all work activities in a safe and efficient manner.

It is the responsibility of all managers / supervisors to ensure local area inductions are completed for all employers, employee's Representatives, sub contractors and visitors under their supervision prior to commencing work in that area ensuring they are:

- Aware of their responsibilities;
- The nature of hazards that may be present; and
- The processes and related documents they may need

4.4.2 Procedure

- A formal induction will be delivered to all employers, Employee's Representatives and contractors on commencement or re-deployment into another team. This will outline the MTCC's safety rules, policies, procedures and applicable legislation. This induction will ensure all personnel are made aware of hazards, risks and applicable safe work

practices. The induction may be delivered in conjunction with the appointed OSH representative for the relevant work area.

- Each employer's manager / supervisor is responsible for ensuring that inductions are carried out according to the requirements of this procedure.
- Confirmation of Safety Induction
- At the completion of the Safety Induction, the employee and manager / supervisor are required to sign the necessary forms from Human Resource Services.

4.4.3 Associated Documents

- Occupational Health & Safety Policy
- Site Specific Induction Checklist

4.5 Visitor Management

MTCC is committed to ensuring that visitors in the site are identified and not exposed to hazards.

4.5.1 PROCEDURE

- All visitors are to report to the front counter (where applicable) and complete the relevant visitor registration documentation and ask for the relevant supervisor / contact person who will take responsibility for them; before entering any workplaces/sites
- Visitors are not permitted to move around workplaces unaccompanied unless authorised to do so
- Employees must provide visitors with basic instructions regarding the worksite and the emergency procedures and are responsible for their visitor during an evacuation. Staff members are always to accompany all short stay visitors
- Visitors are restricted from entering all high hazard areas
- The relevant managers will ensure that the work environment always allows safe access and ways out for visitors; by ensuring walkways remain clear of obstacles
- It is mandatory that all visitors sign the "Visitors Logbook" on entry and exit
- In the event of an emergency the logbook will be collected by the Fire Warden and used in the roll call
- In the event of an accident or incident, employees must ensure visitors complete an Accident, Incident and / or Hazard Report Form

5 Personnel Protective Equipment

MTCC is committed where practicable, to reducing risks in the first instance by means other than protective clothing and equipment (PPE). Where the provision of PPE is deemed appropriate, MTCC is committed to ensuring that all personal protective clothing or equipment complies with the requirements of the appropriate Standards. All staff, subcontractors, employer representatives and visitors must adhere to this policy. All staff must be properly trained in the correct use of PPE.

Evaluate all risks associated with the work and follow recommendations of relevant documents such as JSA, MSDS, SWP, etc. Hazard categories contain and are not limited to;

- Impact (Falling/Flying Objects)
- Penetration (sharp objects piercing foot/hand)
- Compression (Roll-over or pinching objects)
- Chemical Exposure (inhalation, ingestion, skin contact, eye contact or injection)
- Temperature extremes (heat/cold)
- Dust / flying debris (grinding, chipping, sanding, etc)
- Fall (Slip/trip, scaffolds, elevated work)
- Radiation (non-ionizing, UV/IR/Light, welding, brazing, cutting, furnaces, etc)
- Noise (mechanical rooms, machines, cage washing, jack hammers, etc)
- Electrical (Shock, Short circuit, arching, static)

Effective protection must be provided for below listed hazard types where applicable;

- Eye Hazard
- Head/Neck/Face Hazard
- Foot Hazard
- Hand Hazard
- Body hazard
- Fall Hazard
- Noise Hazard
- Respiratory Hazard

5.1 Acquisition and storage

- All PPE must comply with the appropriate Standards;
- Managers / supervisors must carry out regular inspections to ensure that PPE is on hand and is maintained in good condition to ensure its continued effectiveness; and must keep records on any acquisition, cleaning and training in relation to the equipment; and
- Employees must inform their manager / supervisor if there are deficiencies in the supply or condition of any PPE required to carry out work safely.
- Using PPE

- Make sure that:
- PPE is used in accordance with the manufacturers' instructions; and
- The PPE fits correctly, and individuals are instructed and trained in how to use it.
- Training should cover arrangements for the provision, correct use, storage and maintenance of PPE and should be done:
- When new employees start work and when new PPE is given out; and
- A record needs to be kept of any record of any training.

5.2 MANDATORY PPE FOR SITES



Figure 1 Hi Vis Clothing Figure 2 Hard Hat Figure 3 Safety Shoes

5.3 JOB SPECIFIC PPE

5.3.1 Head Protection



Head/ neck/ face should be protected from hazards Such as Falling objects, Flying Particles, Impact Liquid chemicals, acids or caustic Liquids, Harsh Sun Light / UV, Electric Shock.

In construction site Hard Hat is mandatory. However, if the hazard is only Har Sunlight and UV then Appropriate Cap/Hat could be used.

5.3.2 Eye and Face Protection



Eye and face should be protected from flying particles, molten metal, liquid chemical, acids or caustic liquids, chemical gases or vapours, potentially injurious light radiation and Harsh sunlight.

Goggles, Sunglasses welding mask or face shield must be worn in according to Risk Assessment.

5.3.3 Hearing Protection



Any noise above 85 decibel or if you have to yell to hear should be wear some type of hearing protection such as Over ear headphones and ear plugs depending on the risk assessment

5.3.4 Respiratory Protection



Respiratory protection should be worn when hazards such as Chemical and particulate exposure are present at site. This includes and is not limited to welding works, gas cutting operations and other jobs where necessary.

Risk assessment should determine type of mask needed for the job and must wear it to perform it.

5.3.5 Hand Protection



Hand Should be protected from Chemical Exposure Electric Shock, Puncture, cuts/abrasion, high heat/cold and UV / IR Radiation in according to JSA, SWP and SDS

Welders Should wear high quality welders' gloves in according to SWP or JSA.

5.3.7 Foot Protection



Foot should be protected from Puncture, Impact/Compression, High Heat/Cold, Chemical Exposure, Dust/Flying Debris, Slippery/wet surfaces and electrical hazard as per JSA, SWP and SDS

5.3.6 Body Protection



Body should be protected from Chemicals Exposure, High Heat/ cold, impact / Compression, Electric Arc, Cut/ Abrasion and fire inaccordance with JSA, SWP and SDS.

Welders and electrician should wear anti-static and fireproof material overall.

5.3.8 Fall Protection



Working in elevated platform such as Scaffolds, tree trimming, perming works on poles, roofs, fixed ladder should have fall protection harness in according to JSA, SWP and SDS.

5.3.9 Personnel Floatation Device



When Working on deck, quay wall, barge and any risk of drowning should wear appropriate life jacket in according to JSA, SWP.

Also, Life rings should be placed in an appropriate place near the working area.

5.4 CLOTHING RECOMMENDATION

5.4.1 Standard Site Dress



Standard Site dress is Hi-Vis Jacket and pants (or Hi-Vis Overall) with hard hat and safety shoes. MTCC will provide site dress to site and site in charge would provide appropriate dress in according to JSA, SWP and SDS for the nature of work and all employees must wear them.

5.4.2 Kitchen Clothing



Chef and Helper should wear kitchen dress provided by MTCC.

5.4.3 Office Dress



Office personnel standard blue MTCC Polo shirt, khaki pants and safety shoes. When visiting work site for inspection should wear Hi-Vis vest and hard hat.

5.4.4 Use of Sunscreen

All outdoor employees (a person work more than one hour exposed to sunlight) will be supplied with sunscreen cream which should be applied to their uncovered skin in accordance with the manufacturer's directions. It should be applied to the face, ears, necks and backs of hands, and legs if relevant. The cream provided shall be at least the SPF 30+ Broad Spectrum type.

5.4.5 Supply and Use of Sunglasses

All staff working outdoor shall, when practicable, wear general purpose sun protection. These will be made available to relevant employees as part of the standard personnel protective equipment issue.

6 Safe Work Instructions

All work must be properly evaluated and the targets of each day's workload to be clearly understood by all staff working to complete the task. The policy must be followed for all work carried out on site.

6.1 Excavation Operations

- Any excavation or trench of 5 feet or more in depth shall have cave-in protection through shoring, sloping, benching or any other mechanisms approved by the client or regulations (dependent on soil conditions, evaluated by competent person)
- Any excavation or trench of less than 5 feet showing potential of cave-in shall have cave-in protection methods implemented (dependent on soil conditions, evaluated by competent person)
- Competent person will inspect each excavation/trench daily prior to start of work, after every rainstorm, after every hazard increasing occurrence and as needed throughout the work/shift
- Equipment shall be kept a minimum of 2 feet away from the edges of any excavation or trench

6.2 Safety in Civil Work

- Familiarize with formworks needed for the project and identify correct procedure for assembling and dismantling the formworks
- Familiarize with the task at hand and work that needs to be done
- Wear PPE as per needed
- At all times, keep surrounding personnel alert of machinery movement always (excavators, cranes, lorries, etc.)
- Erect safe and sturdy fences and scaffolding works with rails (guardrails, toe boards, screens and flaps) and safety harness fixing possibilities for fall prevention
- Monitor weather always, and stop work if conditions are unfavourable due to low visibility, high wind or other conditions
- Utilize proper safe material movement methods such as trolleys and machinery lifting
- Always provide proper lighting for all work areas, where if artificial light is used, it does not cause glare or deep shadows

6.3 Housekeeping for Construction Areas

- Proper housekeeping helps to prevent accidents and fires as well as creating a professional appearance
- Material will be piled or stored in a stable manner in allocated areas, so that it is not subject to falling
- Combustible materials such as debris, scrap or garbage shall be removed from work area at frequent regular intervals

- Stairways, walkways, exit doors, front of electrical panels and access to fire fighting equipment will be kept clear of materials, supplies, trash and debris

6.4 Workplace inspection procedure

The purpose of workplace inspections is to identify, assess and eliminate or control hazards in the workplace. Regular inspections that are carried out diligently and identify and eliminate or control the risks lead to higher standards of workplace health and safety and are the key to the prevention of incidents and improved workplace safety culture.

6.4.1 Procedure

- OSH Representatives are required to have carried out workplace inspections regularly to keep a record of hazards using the workplace Inspection Checklist.
- The inspection ratings should be ticked appropriately. A= acceptable, U=unacceptable.
- If an item can be corrected without putting a person at risk of harm or injury, it should be remedied and marked accordingly.
- Items that cannot be corrected immediately are to be listed on the safety inspection report at the end of the checklist. Consultation should occur between the OSH Representative and Manager to determine action to be taken, and who will be responsible for this action.
- The completed safety inspection report is to be registered on synergy.
- If an issue has not been resolved by the next inspection it will need to be escalated to the Occupational Safety and Health Committee to assist.

6.4.2 RESPONSIBILITY

Where recommendations for corrective action are made, (in consultation between the OSH Representative and Manager) it is important that the OSH Representative follows up to ensure that such action is being or has been undertaken and, where appropriate share this information with members of the workgroup involved.

Delegation of the issues to be resolved can be assigned to appropriate employers. Assigning different issues to other employers will ensure as many employers as possible are included in the plan. Details of employers and the actions they are required to complete should be clearly explained with target dates to complete actions (these dates should be realistic).

6.4.3 GUIDANCE NOTES - WHAT TO LOOK FOR

The inspection is essentially concerned with unsafe acts/occurrences and unsafe conditions. The following table indicates typical acts/occurrences and conditions to which the workplace inspector/auditor should be alert. The following is not intended to be an exhaustive list.

UNSAFE CONDITIONS AND SAFE ACTS OR OCCURRENCES	
CATEGORY	LOOK FOR
Working Areas, Storage Areas and Access Ways	Work areas or offices too hot or cold. Electrical cables or cords lying across walk areas. Unsafe traffic conditions, such as loose or torn carpet. Damaged or loose tiles. Poor housekeeping and unclean or unhygienic work areas. Slippery or rough surfaces. Uncovered danger areas (Reclamation edges etc.
Materials, Tools and Protective Equipment	Insufficient or damaged tools or personnel protective equipment. Lack of labels or Material Safety Data Sheets. Decomposed, contaminated, corroded, eroded conditions of materials and/ or containers. Unsafe stacking or storage of materials
Lighting	Insufficient illumination for the activity being undertaken. Excessive glare from light source.
Equipment	Leakage of gases fumes and fluids. Electrical testing and tagging not completed or not up-to-date Electrical connections damaged, laying in water or forming trip hazards.
Clothing	Use of defective or lack of personal protective clothing or personnel protective equipment (PPE). Clothing for outdoor workers fails to protect against exposure to sun, cold or heat.
Unsafe Position or Operations	Adopting poor postures. Lifting items too far from body, or too high above shoulders. Twisting, rotating joints or body whilst shifting load.
Operating or Working at Unsafe Rate	Jumping from vehicle, platforms, ladders, benches, etc.

	Driving too far, in a dangerous manner, or for too long period.
Loading, Placing, Storing, Mixing Unsafe	Lifting or carrying loads without carrying out an assessment. Not waiting for team lift. Introducing objects or materials into enclosures so as to create a hazard, e.g., naked lights in paint shops. Storing incompatible materials together Material unloading near working areas

6.4.4 CORRECTIVE ACTIONS

Depending on the risk level of the hazard involved, the following time frames are to be followed when completing recommended corrective actions. Where a timeframe cannot be adhered to, it is the responsibility of the relevant Manager/Supervisor to discuss any delay and seek agreement with the area's OSH Representative and agree on a revised timeframe. (Note: In cases of Severe or Major Risk levels, no delay can be negotiated without the approval of the OSH Coordinator and HR Manager).

Risk Level	Corrective Action Timeframe
Severe	Immediately
Major	1 Day
Moderate	7 Days
Minor	1 months
Insignificant	Within an agreed timeframe

6.4.5 MONITOR AND REVIEW IMPLEMENTED CONTROLS

Once controls are implemented it is important to review the controls in operation. The OSH Representative will review implemented controls at the next inspection. This review allows several important actions to occur -

- Ensuring that the controls have been implemented;
- Reviewing the controls to ensure that they are appropriate and have not created other risks; and
- Re-calculating the risk level of the work area.

6.4.6 ASSOCIATED DOCUMENTS

- Occupational Safety and Health Policy
- Workplace Inspection Checklist

6.5 Safety in Mechanical Activity

6.5.1 Welding Safety

- Combustible material will be cleared from the area around cutting or welding operations
- Welding helmets and goggles will be worn for eye protection and to prevent flash burns
- Eye protection to guard against slag while chipping, grinding and dressing of welds shall be worn
- Any other PPE required shall be worn during welding jobs
- Only certified person may carry out this activity
- Only electrode holders specifically designed for the welding job shall be used
- All parts subject to electrical current will be fully insulated against the maximum voltage encountered to ground
- A ground return cable shall have a safe current carrying capacity equal to, or exceeding the specified maximum output capacity of the welding job
- Cables, leads, hoses and connections will be placed so that there are no fire or tripping hazards

6.5.2 Safety in Gas Cutting Operations

- Wear PPE as per needed
- Only certified person may carry out this activity
- All gas cylinders will have their contents clearly marked on the outside of each cylinder
- Cylinders must be transported, stored and secured in an upright position ensuring they are never left laying on the ground or floor and shall never be used as rollers or supports
- Cylinder valves must be protected with caps and closed when not in use
- All leaking or defective cylinders must be removed from service promptly, tagged as inoperable and placed in an open space removed from the work area
- Oxygen cylinders and fittings will be kept away from oil or grease
- When cylinders are hoisted, they will be secured in a cradle, sling-board or pallet. Valve protection caps will not be used for lifting cylinders from one vertical level to another
- Protection against exposure to harmful gases, fumes, dust, and similar airborne hazards must be furnished through proper ventilation or personal respiratory equipment

6.6 Electrical Safety

- Live electrical parts shall be guarded against accidental contact by cabinets, enclosure, location or guarding
- Working and clear space around electric equipment and distribution boxes will be kept clear and accessible
- Circuit breakers, switch boxes, etc. will be legibly marked to indicate their purpose
- All lamps for general illumination will have the bulbs protected against breakage, and temporary lights shall not be suspended by their electrical cords unless cords and lights are designed for such suspension, and flexible cords to be used for temporary and portable lights shall be designed for heavy duty or extra heavy duty usage
- Employees will not work in close proximity to any part of an electric power circuit unless the circuit is deenergized, grounded or guarded by insulation
- Equipment or circuits that are deenergized will be locked out and tagged out, and tags shall plainly identify the equipment or circuits being worked on

6.7 Ladders Safety

- Ladders will be periodically inspected by a competent person to identify any unsafe conditions, and those ladders with structural defects will be removed from service, and repaired or replaced
- Straight ladders used on other than stable, level, and dry surfaces must be tied off, held, or secured for stability
- Portable ladder side rails will extend at least three feet above the upper landing to which the ladder is used to gain access
- The top or top step of a stepladder will not be used as a step

6.8 Smoke Free workplace

- It is recognised that it is the right of individuals to decide whether they choose to smoke or not. However, MTCC recognises the hazards caused by exposure to environmental tobacco smoke. Therefore, MTCC is committed to providing a Smoke Free working environment including buildings and vehicles for all employers, employee's Representatives, sub-contractors and visitors as per the relevant legislation.
- This policy applies to all work areas including work vehicles for all employers, sub-contractors, visitors and employee's Representatives.

6.8.1 APPLICATION OF POLICY

MTCC has adopted the following standards and expectations in the application of this policy:

- In adopting a policy for the control of the hazard associated with tobacco smoke the MTCC recognises that for employers, sub-contractors, Employee's Representatives and visitors the purchase and use of tobacco is not illegal

- Smoking is always prohibited on all the MTCC premises (except in designated areas), open spaces and in work vehicles
- All employees of the MTCC share the responsibility of adhering to and enforcing the policy and have the responsibility for bringing it to the attention of visitors, Employee's Representatives and/or contractors politely
- Smokers are responsible for disposing of their smoker's litter in a responsible and appropriate manner
- Breaches of this policy will be managed in accordance with Code of Conduct for all employers

6.8.2 COMPLAINTS

- Complaints about non-compliance with this policy and site procedures on smoking should be made, in confidence if necessary, to your manager / supervisor in accordance with MTCC Grievance Procedure

6.8.3 RESPONSIBILITIES

- Managers / supervisors
 - o Promote and implement this policy at all workplaces
 - o Resolves any complaints about non-compliance that may arise with the assistance of Human Resources
 - o Refer employers to the Employer Assistance Program if requested and provide support to individuals trying to quit smoking
- Employers and others
 - o Comply with this policy at all workplaces
 - o Must not smoke, if directed to stop smoking in accordance with this Policy or site procedures
 - o Support individuals trying to quit smoking

7 Hazard Identification & Risk Assessment

Safe work Procedure are prepared for activities that we consider high-risk or that resulted in incidents in the past. The safe work Procedure have been divided into the following categories:

- Lifesaving rules for instance, lifting, dropped objects, etc.
- Occupational exposure for instance, asbestos, heat stress, etc.
- Specific activities for instance, anchor handling, towing, etc.
- Environmental instructions for instance, waste management, refuelling, etc.

7.1 Hazard Identification

A Job Safety Analysis (JSA) is intended to identify the potential hazards of each step of a job and to recommend the safest way to get the job done. When the Risk Assessment determines that an activity is non-routine and/or has a high initial risk, a JSA must be prepared. All attendees will sign to indicate that they have read and understood the JSA and will work in accordance with it. Measures must be taken to eliminate the high risk prior to commencing work.

This procedure will apply to all employers/employees and sub-contractors who perform construction work for MTCC. Jobs with High frequency injury, and obvious high risk and any new job or new site location should have JSA done.

7.1.1 Procedure

Steps for a supervisor / manager to follow when completing a JSA are:

- Break the job down into basic steps.
- (what are the steps you take to complete the job)
- Identify the hazards per job step.
 - o Process (procedures, standards, laws and regulations, Safe Work Practices, permits)
 - o Environment (access and egress, weather, cold, dust, noise, other workers, housekeeping)
 - o People (untrained, inexperienced, unsupervised, stress, fatigue)
 - o Equipment, materials and tools (sharp, hot, heavy, pinch points, isolation, certification)
- Identify the safeguards. (what can you do to minimise the chance/effect of a hazard)
- Agree on who is responsible for implementing the safeguards. (who will make sure the safeguard is in place)
- Discuss the JSA and communicate about it with the people involved prior to start the activity.

7.1.2 RECORD KEEPING

- A current copy of all JSAs will be maintained electronically and a hard copy kept in the employer's personal file for the employer to access and review. The JSA Record Form should be completed for each job and kept close to the job site for handy reference.
- JSA's must be reviewed regularly, as jobs can change over time with the introduction of new machinery or processes. Depending on the job, JSA's should be reviewed on monthly or yearly schedule.
- If a JSA indicates that procedural changes need to be made, employees must be retrained, and records of training kept. For annual or biennial reviews, retraining should be mandatory, irrespective of changes. All JSAs will be documented on the attached form (addendum I) for consistency and continuity.

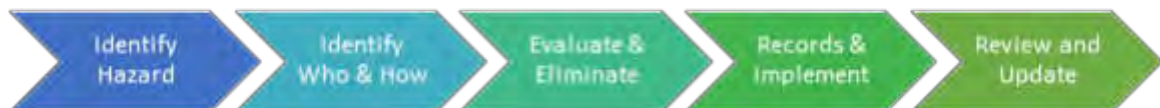
7.1.3 HIERARCHY OF CONTROL

- Elimination – can the hazard be removed from the work environment?
- Substitution – can the hazard be eliminated by using another item that is less harmful?
- Isolation – can the hazard be reduced by relocation, segregation or repositioning
- Engineering – can a better design prevent exposure to hazards?
- Administrative controls – can we improve systems or work procedures?
- PPE – should be used as the last resort and used to provide additional safety

7.2 Risk Assessment

How to assess the risk

- Identify the hazards that could arise from the activity (use Safe Work Procedure and Hazard Identification Sheet).
- Identify who (or what) might be harmed and how.
- Evaluate the risk arising and decide on mitigating measures (use the risk matrix).
- Record findings and implement them.
- Review and update the Risk Assessment when necessary.



- These Assessments shall be in writing and include but not restricted to the following activities
 - o Major Construction Elements
 - o General Public and third part safety
 - o Location of site access/egress
 - o Vehicle movements on and off site
 - o Vehicle, Machinery and equipment hazards within the site

- Vehicle pedestrian segregation
- Temporary services Distribution
- Siting of static plant and equipment
- Scaffolding
- Trench/ Ground Works
- Hazardous Chemical
- Services Clearances
- Construction Materials
- Storage, use and disposal of substances hazardous to health
- Noise
- Working at heights
- Excavation and underground services
- Manual handlings
- Use of portable hand tools
- Emergency procedures including evacuation routes
- Fire
- Material Storage
- Site Hoarding
- Contaminated Ground
- Lifting new elements of structure
- Prepare a risk assessment for each Task
 - Responsible Manager/safety officer coordinates the risk assessment with supervisor.
 - Reviewed periodically and update when necessary
 - The Measures must be implemented
- Obtain a Permit to Work for defined High-Risk activities
 - For identified high-risk activities
 - Defined control measures must be implemented
 - Permit to Work checklist must be completed and attended
 - Project manager/Site Manger will issue Permit to Work
- Make a Job Safety Analysis (JSA) for Hazardous & Non-Routine activities
 - Manager must do a JSA
 - Defined control measures must be implemented
- Be informed about risk & control measures
 - Everyone on sites, vessel and offices is informed about the relevant risk and control measures
 - Toolbox meeting before starting a high-risk activity
 - Updates to communicated to persons on-site
- Be fit for duty and wear PPE
 - Fit for Duty
 - PPE on site (Mandatory Safety shoes, Hard Hat, Hi-Vis Clothing)

- Additional PPE are job specific based on JSA, Permit to Work or Risk Assessment
- Discuss findings with employees/persons responsible for creating the condition and allow for their comments, suggestions and aid
- Where hazards are caused by subcontractors on the job, discuss the situation with the senior person in command, identify the problem to the owner, contractor and other parties involved
- Ensure recommended corrections/changes are discussed with the proper supervisor/person for correction
- Follow up on changes, corrections and other actions necessary
- Where applicable, provide copy of checklist to company health and safety liaison officer, along with statement of corrective actions taken or still required

7.3 Last Minute Risk Assessment

- A Last-Minute Risk Assessment (LRMA) is a brief hazard review of a task which is done just before start of work. It can be done verbally. The purpose is to check / remind everyone involved of the risks and ensure there is no unforeseen risks, such as weather changes.
- Do you understand the risks linked to the job?
- Do you have the right equipment to do your work safely?
- Are you work area clean and orderly (Housekeeping)?
- Do you know your Co-workers and supervisor of the job?
- Do you know what to do in case of emergency?
- Do you use the required PPE?
- Do you Think about:
 - Weather Conditions
 - Spills and leaks
 - Access escape routes
 - Other work and people around you
 - Underground cables and pipes
 - Heavy machinery working around you
 - Permit to Work

8 Incident Investigation procedure

No accidents should be ignored on site. Small incidents to major accidents should be logged and attended to immediately. Continuous improvement will result in a safer work environment on site.

8.1 An incident

The categories below define the types of hazards and incidents that must be reported:

- Hazards, near misses, injuries to employers, contractors, Employee's representatives and visitors sustained whilst at any MTCC sites or occupied buildings and grounds;
- Hazards, near misses, injuries to employers, sub-contractors, Employee's Representatives and visitors sustained whilst engaged MTCC activities;
- Hazards or incidents involving potential risk to, or contamination of, air, water or soil, on or off-site, or noise levels to local communities that exceed regulatory limits and result from the MTCC.

8.2 Systematic Management of Incidents

Where a hazard has been identified by Safety Officer, the safety officer must:

- Resolve the hazard if able to do so safely. If the hazard cannot be resolved immediately, make the area safe and alert others;
- Complete the Hazard Report Form as soon as possible but within 12 hours of discovery of the hazard and forward the form to their manager / supervisor immediately for investigation and resolution.
- Within 24 hours of receipt of the Hazard Report Form, the site manager must:
- Eliminate or minimise the hazard immediately. If the hazard cannot be resolved immediately undertake an investigation and conduct a risk assessment in accordance with this procedure;
- Determine and implement risk controls in accordance with the Hierarchy of Risk Control.

8.3 Reporting Process

- Attend to the injured and notify emergency services if necessary. Get help if required;
- Make the site safe to prevent further injury, accident or incident;
- Secure the site of the incident to ensure that it is not disturbed;
- Notify manager / supervisor of the hazard or incident immediately;
- In the case of:
 - o An employer, contact the manager / supervisor;
 - o A contractor, contact their supervisor or the project manager;
 - o A volunteer contacts the manager or supervisor who is overseeing them.

- The manager / supervisor who the hazard or incident is reported to must immediately notify the appropriate Safety and Health representative. Where they cannot be contacted, they must notify the OHS Coordinator.
- An accident / incident must be reported immediately (or within 24 hours or as soon as practicable, depending on circumstances) to the manager / supervisor through safety officer. If a manager / supervisor is unavailable, then the accident/incident must be reported to the next line of management.
- The reporting employer/officer must complete the Incident form. All documentation must be held on Synergy and recorded in the Register.
- Following the notification of an accident / incident, the manager / supervisor must take the following action (where relevant):
 - o Take photos of the accident site;
 - o Communicate with witnesses and obtain statements (where practicable) and statements from other third parties involved in the accident / incident;
 - o Ensure the completion of the “Workers’ Compensation 2B Form” if applicable and other relevant insurance details.

8.4 Accident Records

- OHS will use the data to:
 - o Plan health and safety programs and initiatives;
 - o Monitor the effectiveness of corrective/preventive actions;
 - o Produce reports on hazard and incident statistics and trends for management and the OHS committee;
 - o Meet statutory record-keeping requirements.

8.5 Determining the Root Cause

- The investigation should be completed within 24 hours of receiving the Accident / Incident Report form by the supervisor / manager or OSH Representative;
- Identify the sequence of events that occurred prior, during and after the hazard or incident being identified;
- Identify the hazards applicable and the nature of any injury or affliction that was sustained as a result, not just immediate but upon further information;
- Identify any contributing factors;
- Identify if the activity was a process, and if this is the case initiate a review of the risk management associated with this process;
- Identify suitable controls measures in line with the hierarchy of controls;
- Some investigations may require the assistance of external experts, the Safety & Health Representative shall be present should Police be present at an investigation.

8.5.1 Root Causes

- Action must be taken to ensure identified root causes are attended to immediately upon identification
- Following an incident, it is the responsibility of the manager / supervisor to take steps to correct the problem and to prevent a recurrence by implementing the recommendations arising out of the investigation.
- The manager / supervisor needs to consider the duty of employers in OHS legislation to provide a healthy and safe work environment so far as is reasonably practicable. Controls must also be evaluated after implementation to ensure they are effective and have not introduced any other hazards or risks

9 First Aid

- First aid kit shall always be available on site, and all staff shall be familiarized with the location
- First aid kit shall be serviced on a schedule to ensure no expired items are within the first aid kit
- Supervisor and other person in charge shall undergo first aid training to be able to provide help to injured persons on site

10 Emergency Response

10.1 Personnel Roles and Lines of Authority

All personnel on site

All personnel on site has their own responsibility to notify the supervisor of any hazardous/risky site conditions. All personnel must follow the policy to achieve a zero-accident work site.

Supervisor

Supervisor must attend to any injuries or incidents immediately and maintain a log of events. Supervisor must always be available on site and provide alternate contact numbers for circumstances of no contact with the supervisor.

Manager

10.2 Evacuation Routes and Procedures

- Site layout must be understood by all personnel on site
- Visitors must be guided through the site by a staff
- Evacuation routes shall not be blocked by vehicles, materials, supplies, trash and debris

10.3 Emergency Contact/Notification System

- First person to be contacted to is the site supervisor in any emergency cases. Supervisor shall handle the situation as per circumstance.

- National emergency response personnel are listed below for the context to MTCC work environment;
 - o Police: 119
 - o Fire: 118
 - o Ambulance: 102
 - o ADK Hospital: 331-3553
 - o Indira Gandhi Memorial Hospital: 333-5335
 - o Covid-19 Hotline: 1676

10.4 Emergency Medical Treatment

- Person with basic first aid training must be available at site
- Emergency response to be contacted immediately
- Manager to be notified of any medical emergency on site

10.5 Emergency Equipment

- First aid kit should always be available on site
- Stretcher should always be available on site

10.6 Procedures for Field-Work Related Injury

11 SOP on COVID 19

With the current outspread of the corona virus, it is important to ensure that all actions are taken to minimize the spread of the disease. Work environment consists of a group of labours and other personnel working together to complete the project. This creates risk of spread as these personnel interact with each other throughout the day.

Sleeping, eating and physical project works are carried out in the presence of each other. These are measures taken to make the work environment as safe as possible.

11.1 SCOPE

Effective on all personnel on site, permanent and temporary (visitors) where applicable.

11.2 APPLICATION OF POLICY

MTCC has adopted the following standards and expectations in the application of this policy:

- Entrance to the site
 - o Hand washing facility to be provided
 - o Liquid soap/Sanitizer/Tissue/Hand dryer related amenity to be provided
 - o Easy to operate, foot-controlled dustbins to be available
 - o Dustbins to be cleared & cleaned daily
 - o All visitor's information to be logged, with name, contact number, designated office and purpose of entry to be included.
- Site office
 - o Staff to be provided easy hand wash facility
 - o Liquid soap/Sanitizer/Tissue/Hand dryer related amenity to be provided
 - o Easy to operate, foot-controlled dustbins to be available
 - o Dustbins to be cleared & cleaned daily
 - o Regular points of contact such as switches, door handles, mouse & keyboards, counter tops, tables, chair arm rests, furniture, railings and such to be cleaned and disinfected according to a schedule
 - o If sneezing or coughing, to wear masks
 - o Wear gloves when handling cash and tickets and such
 - o Floors to be cleaned and disinfected according to a schedule
- Accommodation
 - o Staff to be provided easy hand wash facility
 - o Liquid soap/Sanitizer/Tissue/Hand dryer related amenity to be provided
 - o Easy to operate, foot-controlled dustbins to be available
 - o Dustbins to be cleared & cleaned daily
 - o Regular points of contact such as switches, door handles, mouse & keyboards, counter tops, tables, chair arm rests, furniture, railings and such to be cleaned and disinfected according to a schedule

- Floors to be cleaned and disinfected according to a schedule
- Other elements
 - Posters encouraging regular hand washing and hygiene promotion to be posted around site in understandable language
 - Reduce gatherings as much as possible
 - Throw away masks and tissues to dustbins after use
 - No spitting within site
 - Clean all toilets in a schedule
 - Follow HPA guidelines

11.3 COMPLAINTS

Complaints about non-compliance with this policy and site procedures on following the covid-19 prevention measures and cleaning should be made, in confidence if necessary, to your manager / supervisor in accordance with MTCC Grievance Procedure.

11.4 RESPONSIBILITIES

Managers / supervisors

- Promote and implement this policy at all workplaces
- Resolves any complaints about non-compliance that may arise with the assistance of Human Resources

Employers and others

- Comply with this policy at all workplaces
- Support individuals in cleanliness and hygiene related matters

12 Attachments

- 12.1 Accident Report Form
- 12.2 Accident Investigation - Supervisor's Report
- 12.3 Monthly Construction Site Inspection Checklist
- 12.4 Induction Checklist

MTCC
Accident/Dangerous Incident Investigation Report
(Form 8.4)

Reference No: _____

Project: K.Thilafushi Harbour Rehabilitation Project

Date of Incident: ____/____/____

Time of Incident: _____

Type of Accident/Dangerous Occurrence:

☐ Injury

☐ Damage

☐ Near Miss

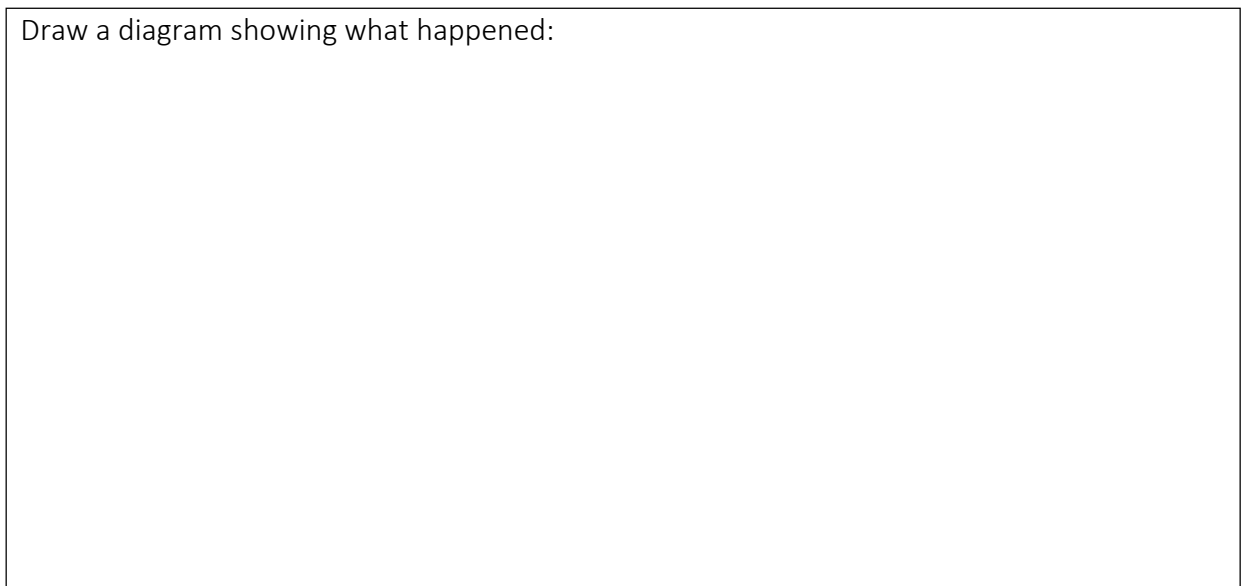
Names of Persons Involved:

Names of Witnesses:

OBSERVATION

Describe clearly how the accident/dangerous incident occurred, including details of the extent of injuries and property damage as appropriate:

Draw a diagram showing what happened:



ANALYSIS

What acts, failures to act, or conditions contributed most directly to this accident/incident?

EVALUATION

Proposed Corrective Action:

SIGNATURES

Investigating Officers Name: _____ Position: _____

Signature: _____ Date: ____/____/____

OHS Committee/Representative(s) Comments (if applicable):

Name: _____ Position: _____

Signature: _____ Date: ____/____/____

Senior Management's Comments:

Name: _____ Position: _____

Signature: _____ Date: ____/____/____

FOLLOW UP

Comments of Project Manager or Investigating Officer Re: completion of Corrective Action.

Name: _____ Position: _____

Signature: _____ Date: ____/____/____

Accident Reporting Form

EMPLOYEE DETAILS

Name: _____ Position: _____

Address: _____

INJURY DETAILS

Date of accident: _____ Time: _____ Date Reported: _____ Time: _____

Date ceased work: _____ Time: _____ Supervisor: _____

Time lost (to date): _____ Time lost (anticipated overall) _____

Medical Treatment required:

Nature and extent of injury			
Part of body injured	☐ Head	☐ Trunk	☐ Multiple
	☐ Eyes	☐ Arm	☐ General
	☐ Neck	☐ Leg	☐ Unspecified
Nature of injury	☐ Sprain	☐ Laceration	☐ Burn
	☐ Fracture	☐ Concussion	☐ Superficial
	☐ Multiple	☐ Dislocation	☐ Amputation
	☐ Contusion	☐ Other	
Type of incident	☐ Flying object	☐ Manual handling	☐ Electricity
	☐ Struck by	☐ Poisons	☐ Fall
	☐ Caught in	☐ Temperature	☐ Other
Describe the events leading up to the injury and how the injury occurred (witness or injured person's statement).			

Accident Investigation - Supervisor's Report

Witness Details			
How did the accident happen			
What caused the accidents	☐ Ineffective guarding	☐ Lack of protective equipment	☐ Lack of training
	☐ Lack of maintenance	☐ Safety rules not followed	☐ inexperience
	☐ Unsafe work methods	☐ Misconduct	☐ Workplace design (equipment, design, layout)
	☐ Weather	☐ Poor housekeeping	☐ Language difficulties
Explain			
How can a recurrence be prevented?			

Supervisor's name:

Signature:_____ **Date:**

Appropriate Government/insurance bodies Advised? (If applicable)

Yes/No

Date: _____

Is this a Work-related injury?

Yes/No

CONSTRUCTION SAFETY INSPECTION CHECKLIST			
Date:		Ref No.(s):	
Location:		No of Workers:	
Safety Officer:			
A – Acceptable U - Unacceptable ITEM COMMENTS/CORRECTIVE ACTION			
Housekeeping (Garbage, cleanliness, electrical cords, ladders)			
Drinking water/ sanitation requirements/first aid kit			
Electrical (such as proper grounding, lock & tag and GFCI [good condition, inspected])			
Proper personal protective equipment (PPE)			
Walking/working surfaces (tripping hazards, slippery surfaces, floor holes)			
Electrical tools (guards in place; good condition, stored properly)			
Lighting (for example: Insufficient illumination for the activity being undertaken)			
Dredging/ Reclamation (properly sloped or shored with bunds)			
Flammables/combustibles (fire extinguishers, welding and cutting equipment)			
Hot work (PPE, permit, combustibles, flammables protected)			
MSDS's onsite with containers labeled			
Scaffold system fully assembled; tags; inspections; fully planked guardrails			
Proper barricading/ warning signs (trenches, fuel areas, storage construction sites)			
Fire extinguishers (monthly inspection, accessible, on mechanized equipment)			
COMMENTS:			

OHS Induction Checklist-MTCC

Work Site:		
Employee Name:		
Job Title:		
Date:		
General Induction <i>(The workplace is to ensure that the above named employee has been provided with following information and/or instructions)</i>		Provided
Department Occupational Health and Safety (OHS) Policy		☐ Yes
OHS Issue Resolution Flowchart		☐ Yes
The names of the Health and Safety Representative and Management OHS Nominee (if applicable)		☐ Yes
Hazard, incident and near miss reporting procedures		☐ Yes
Evacuation Plan		☐ Yes
Location of amenities		☐ Yes
First Aid Procedures		☐ Yes
Introduction to First Aid Officer(s) and location of First Aid Rooms/Kits		☐ Yes
Emergency Procedures		☐ Yes
OHS Training Requirements (tick when completed)		Completed
Stationed to new project site after being employed by MTCC		☐ Yes
Job Specific Induction (tick when completed)		Completed
Task specific Safe Work Procedures have been provided and explained (e.g. use of plant and equipment)		☐ Yes
Signatures		
Employee – <i>I have completed all identified training and understood the OHS induction applicable to my appointment.</i>	Signature: Date:	
Workplace Manager and/or Management OHS Nominee - <i>I certify the above-mentioned employee has completed an OHS induction and relevant training.</i>	Signature: Date: Name: Position:	

Accident Investigation - Supervisor's Report

[illegible]

THILAFUSHI HARBOUR REHABILITATION PROJECT

Monitoring Report 01

November 2020

PREPARED BY:
MALDIVES TRANSPORT AND CONTRACTING COMPANY PVT LTD

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1. Introduction

This monitoring report is prepared as part of the Environmental Protection and Preservation Act, law 4/93 and as a requirement of the EIA regulation 2012 which mandates that a proper environment impact assessment is undertaken for development projects and a monitoring program be undertaken to assess the impact on the environment. The EIA for the project was prepared by Ahmed Jameel (EIA P07/2007) & Abdul Aleem (EIA P03/2019) in December 2019. The project involves harbour rehabilitation, waste processing, administrative building, workshop and civil works for C & D plant, recycling yard and ELV dismantling workshop at K. Thilafushi.



Figure 1

2. Purpose

The purpose of this monitoring report is to ensure that the environmental thresholds, as specified, in the regulations are not surpassed during the project. This will ascertain that the mitigation measures recommended in the EIA are effective and whether necessary actions need to be taken to further improve the mitigation measures.

3. Methods

The monitoring methods prescribed in the monitoring section of the EIA Report was followed during the collection of data for this report.

Noise level

Noise levels were measured at the 5 locations sampled in the EIA. Measurements were taken during daytime from 4:00pm to 5:00pm.

Marine Water Quality

Water quality parameters for the marine environment were measured in situ by using YSI multi-parameter water quality meter. The parameters that were measured are in table 1.

Parameter	Unit
Conductivity	μS/cm
Salinity	psu
Total Dissolved Solids	mg/L
Temperature	°C
pH	-
Turbidity	FNU
Total Suspended Solids	mg/L
Dissolved Oxygen	mg/L

Table 1: Parameters measures for marine water

Ground water quality

Ground water samples were taken in 375ml glass bottles from 4 locations to be tested at MWSC laboratory. The tested parameters are detailed in table 2.

Parameter	Unit
Conductivity	μS/cm
Total Dissolved Solids	mg/L
pH	-
Turbidity	FNU
Total Petroleum Hydrocarbons	mg/L
Total coliforms	mg/L
Lead	mg/L
Phosphate	mg/L
Nitrate	mg/L
Manganese	mg/L
Iron	mg/L
Chloride	mg/L

Table 2: Parameters measured for ground water

4. Monitoring locations

Water quality



Figure 2: Water sampling locations

Water samples for environmental monitoring were taken from the locations marked in figure 2. Marine water (SW) was sampled from 7 locations and ground water (GW) was sampled from 4 locations.

Noise level



Figure 3: Noise sampling locations

Noise levels were measures at the locations marked in figure 3.

5. Analysis and Results

Marine water quality

The samples taken from the sites SW1 to SW6, which were surrounding Thilafushi, appeared clear with particles. However, water at SW7 was a pale green colour (locations marked in figure 2). The water was tested in situ for pH, temperature, turbidity, total suspended solids, salinity, and dissolved oxygen. The results did not vary much and pH, temperature, turbidity and TSS remained within the thresholds recommended by EPA.

Salinity and DO are in the usual ranges in the Maldives as well. Salinity measurements in the sea water in Maldives usually range between 33 - 45‰ (Stoddart, 1966, as cited in Jameel & Aleem, 2019). Dissolved oxygen in the sea water ranges between 4 – 8mg/L (Naeem & Sattar, 2007).

The table below outlines the results of the water tests.

Parameter	Optimum Range	SW1	SW2	SW3	SW4	SW5	SW6	SW7
Physical Appearance	-	Clear with Particles	Clear with Particles	Clear with Particles	Clear with Particles	Clear with Particles	Clear with Particles	Pale green with particles
pH	6.0 - 9.0 (ANZECC, 2000)	8.43	8.46	8.45	8.46	8.46	8.5	8.51
Temperature (°C)	18 - 32 (ANZECC, 2000)	29.8	29.5	29.42	29.58	29.67	30.65	30.17
Turbidity (NTU)	<3 (EPA)	0.29	0.08		0.04	0.04	1.55	1.99
Total Suspended Solids	<5 (EPA)	<5	<5	<5	<5	<5	<5	<5
Salinity (‰)	-	34.97	34.94	34.93	34.94	34.98	35.00	34.80
DO (mg/L)	-	5.97	6.07	6.29	6.26	6.00	6.99	7.23

Table 3: Results for samples SW1 - SW7

Ground water quality

Ground water samples were taken from locations GW1 to GW4, as seen in figure 2. Samples were sent to MWSC to be tested for conductivity, pH, total dissolved solids, turbidity, total petroleum hydrocarbons, total coliforms, lead, phosphate, nitrate, manganese, iron, and chloride. The results are pending.

The taken samples had varying appearances:

GW1 – olive green with dark particles

GW2 – milky with white particles

GW3 – very pale yellow/green

GW4 – clear



Figure 4: Ground water samples, residues settled, from left to right GW1, GW2, GW3 & GW4



Figure 5: Ground water samples, agitated, from left to right GW1, GW2, GW3 & GW4

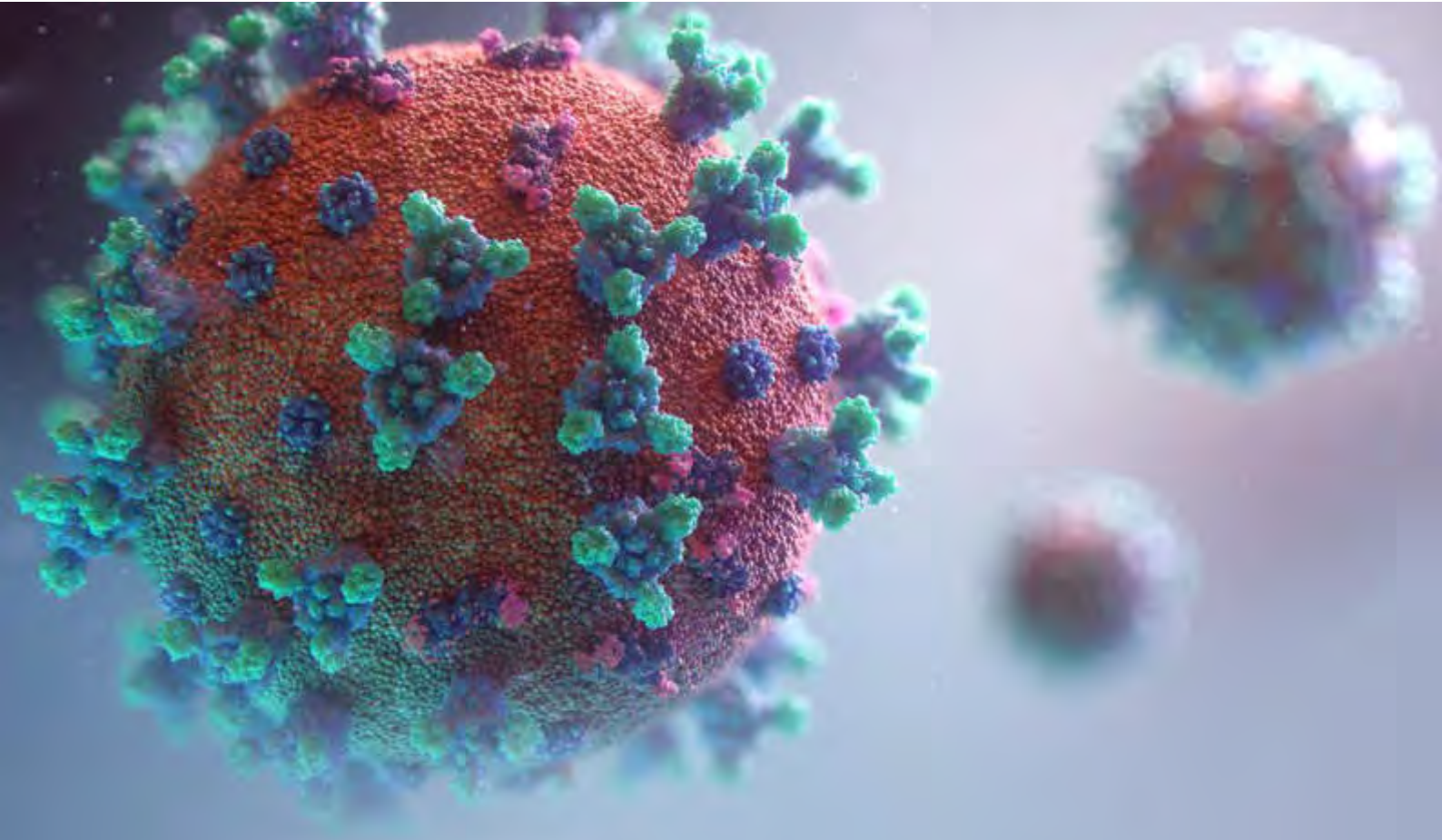
Noise levels

Noise levels were measured from 5 locations during daytime, from 4:00pm to 5:00pm. The noise levels are relatively low and similar to the values in the baseline study in the EIA.

Table below shows the measured noise levels on 23rd November 2020.

Location	Noise level/ dBA
NQ1	67.1
NQ2	66.4
NQ3	54.2
NQ4	54.0
NQ5	54.2

Table 4: Noise levels



HEALTH & SAFETY PLAN

Standard Operating Procedure on COVID19

for Greater Male' Environmental Improvement and Waste Management Project

Prepared By:

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Greater Male' Environmental Improvement and Waste Management Project.
Ministry of Environment.
Republic of Maldives.

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1 PROJECT BACKGROUND

The Greater Male' Environmental Improvement and Waste Management Project (GMEIWMP) is a multi-donor funded project which aims to establish a sustainable and integrated solid waste management system in the Greater Male' region (Zone 3: AA, ADh, K, and V, Atoll islands) including collection, transfer, treatment using advanced waste to energy (WTE) technology, disposal, recycling, dumpsite closure and remediation, public awareness in reduce-reuse-recycle (3R) and strengthen institutional capacities for service delivery and environmental monitoring. The project will create a cleaner environment, contribute to reductions in the cost of electricity, reduce greenhouse gas emissions, and improve climate change resilience and disaster risk management.

The recent outbreak of COVID19 poses risks to the implementation of the project in several aspects. Both indoor and outdoor related activities of the project are at risk. Outdoor activities include components of this project which involves civil works and surveys. Indoor activities include works related to project management and administration. All project activities need to be implemented in such a way that the health and safety of all project personnel are ensured.

2 INTRODUCTION

This document is not intended to substitute any formalized procedures currently in place for all project personnel, including the Project Management Staff, Project Implementation Staff, Contractors, Sub-contractors, Managers, Supervisors, and workers. Where this guideline does not meet or exceed the standards put forth, all Project Personnel shall abide by the most stringent procedure available.

The instructions given in this Health and Safety Plan must be followed by all Project Personnel as mentioned above, including all personnel at the PMU/PIU Offices, Contractor's Field Offices, Construction Sites and worker camps.

The Contractor must assign a COVID-19 Officer at the Contractor's worksite who is appointed by Contractor and agreed by PMU. The COVID-19 Officer must submit a written report to the Client's Representative (Social and Environmental Safeguard Specialist of the PMU) weekly. The COVID-19 Officer shall verify that the Contractor and all subcontractors are in full compliance with this H&S Plan and other guidelines and instructions given by the Health Protection Agency (HPA) and must submit a written report weekly to the Social and Environmental Safeguard Specialist of the PMU. The COVID-19 officer should be present on site at all times.

Any issue of non-compliance with these guidelines/plans shall be a basis for the suspension of work. The Contractor will be required to submit a corrective action plan detailing each issue of non-conformance and a plan to rectify the issue(s). The Contractor will not be allowed to resume work until the plan is approved by the Client. Any additional issues of non-conformance may be subject to action against the Contractor's as health & safety/safeguard clauses of the contract.

Construction sites operating during the Covid-19 pandemic need to ensure they are protecting their WORKFORCE and minimising the risk of spread of infection.

The health and safety conditions of any construction activity must not be compromised at this time. If an activity cannot be undertaken safely due to a lack of suitably qualified personnel being available or social distancing being implemented, it should not take place.

This H&S Plan must be made available at all the Project related areas including PMU/PIU Offices, Contractor's Field Offices, Construction Sites and workers camps. The salient features must be displayed through signages at the appropriate locations throughout work sites and stretches for wider dissemination and awareness.

This document is intended to introduce consistent measures on sites of all sizes in line with the HPA and Government's recommendations regarding COVID19. The Contractor and all other relevant project personnel must comply with this H&S Plan and shall follow and abide by the guidelines and instructions given by the Health Protection Agency (HPA) relating to COVID-19.

If a worksite is not consistently implementing the measures set out, it may be required to shut down.

3 OBJECTIVES OF THE PLAN

The overall objectives of this Health and Safety Plan is to:

- Control and prevent disease transmission among all project personnel. (workers/staff)
- Protect those who are at high risk for complications. (those with underlying health problems)
- Maintain construction operations as efficiently and safely as possible.
- Ensure the overall protection of health and safety of all project personnel. (workers/staff)

4 CLEANING AND DISINFECTION OF OFFICES PRIOR TO RESUMPTION OF WORK

All project activities were on hold due to the lockdown enforced by the government of Maldives to reduce the spread of COVID19. However, when the lock down is lifted and permission is given to resume work, it is important to have a plan to ensure that the COVID19 disease infection rate does not rise again.

Some scientific studies have reported that a number of people infected with COVID-19 are “silent spreaders,” that is, either asymptomatic or pre-symptomatic, exhibiting no signs of fever, cough, or laboured breathing. All project personnel must assume that some workers are likely to come to work while infectious. Enforcing physical distancing, establishing administrative controls to minimize worker contact, and mandating the use of personal protective equipment (PPE) are all part of pandemic response. However, keeping indoor work areas clean and hygienic plays a critical part in infection control too.

Before the offices are opened and works are resumed, it is crucial that these offices and work areas are cleaned and disinfected. More information on Cleaning and Disinfecting can be found on Section 8 which can be applied to cleaning and disinfecting of offices prior to resumption of work.

While cleaning and disinfecting before work resumption, more emphasis should be given to high traffic areas in the workplace like reception area, lobby, rest rooms and meeting rooms.

However, the use of foggers or wide area spraying of disinfectants is generally discouraged and should not be a substitute for directly applying the disinfectant onto a surface. HPA approved liquid disinfectant products are recommended to clean contaminated surfaces.

All personnel involved with the cleaning and disinfecting must wear appropriate PPE to avoid contamination and chemical exposure.

5 PREPARATION OF OFFICES PRIOR TO RESUMPTION OF WORK

All project personnel should continually monitor international (World Health Organization), and national (Health Protection Agency) guidelines for changes in recommendations, cleaning strategies, and other best management practices. For example, general guidelines regarding best practices for specific industries, worker hygiene, cleaning and disinfection, physical distancing, and employee wellness should be reviewed and addressed.

Aspects to reopening an office that should be emphasized during the pandemic include, workplace configuration, (conference rooms, lobby and common areas, kitchens, ventilation)

and enhanced cleaning practices. All of these aspects, regardless of workplace sector or size, should be considered to ensure both worker safety and comfort when returning to work.

Prior to re-occupancy, perform a detailed review of the configuration of your workspaces:

- Consider eliminating reception seating areas and requesting that guests phone ahead or install a plastic partition at the reception area.
- Review floorplans and remove or reconfigure seats, furniture and workstations as needed to preserve recommended physical distancing in accordance with guidelines.
- Reconfigure workstations so that employees do not face each other or establish partitions if facing each other cannot be avoided.
- Consider using signage to aware and inform the employees about good practices.
- Employees should be encouraged to use virtual meeting tools, including phone and virtual teleconference, in lieu of in-person meetings, whenever possible.
- If in-person meetings are essential, consider limiting meetings to 10 people or less depending on local, state, and federal guidelines.

During the reopening process, employers should also consider how they will prepare their workforce. Aspects such as communication, training, and employee comfort are important to have in mind during development of the reopening plan to address employee.

- Communicate to employees what is being done to mitigate the spread of COVID-19 (e.g., disinfection routine, health policies for staff, and health & safety measures in place).
- Employers should notify employees of new workplace policies and changes prior to reopening and upon resuming operations.
- Ensure all protective measures and supplies are available prior to occupancy (e.g., demarcate floors that have access to the public, rearrange office lay-out to increase distance between employees, provide adequate hand washing/hand sanitizer supplies, etc.).
- Prior to reopening, consider flexible work schedules, work from home options, and shift rotations as per advice from the relevant government agencies, to reduce the density of employees in common areas such as screening areas, break rooms, and locker rooms.

6 CONTROL AND PREVENTION

Measures for protecting workers from exposure to, and infection with, SARS-CoV-2, the virus that causes Coronavirus Disease 2019 (COVID-19), depend on the type of work being performed, contamination of the work environment, and exposure risk, including potential for interaction with people with suspected or confirmed COVID-19. Contractors should adapt infection control strategies based on this H&S Plan and other relevant guidelines and standards put in place by HPA, using appropriate combinations of engineering and administrative controls, safe work practices, and personal protective equipment (PPE) to prevent worker exposures.

6.1 Screening

- After the lockdown is lifted and permission is given to continue physical works at sites, an initial screening must be conducted for all workers, supervisors and managers, in advance of arriving to the job site. This initial screening would be conducted **one time** only. If the visitor answers “yes” to any of the following questions, he/she should stay home as they are of high risk for severe illness from COVID19 (See Appendix I)
- The Contractor shall Identify workers who may be at increased susceptibility for COVID19 infection or complications from COVID-19 as mentioned above and consider adjusting their work responsibilities or locations to minimize exposure. Other flexibilities, if feasible, can help prevent potential exposures among workers who have underlying medical/health conditions as stated in Appendix I.
- The Contractor shall also carry out **daily** health screening (See Appendix E) of workers using contactless temperature checks prior to site entrance, during working hours and after site works to identify persons showing signs of being unwell with the COVID-19 symptoms.
- Contractor must keep records of both Initial Screening and Daily Health Screening which takes place at the site.

6.2 Risk Assessment

Worker risk of occupational exposure to COVID19 may depend in part on the industry type and the need for contact within 6 feet of people known to be, or suspected of being, infected with COVID19. Other factors, such as conditions of workers' labour quarters, work environment, their activities outside of work (including travel to COVID-19-affected areas), and individual health conditions, may also affect workers' risk of getting COVID-19 and/or developing complications from the illness.

The risk exposure levels can be divided into 4 parts: very high, high, medium, and lower risk, as shown in the occupational risk pyramid, below. The four exposure risk levels represent the probable distribution of risk. Most workers related to this project will likely fall in the lower exposure risk (caution) or medium exposure risk levels.



Occupational Risk Pyramid

The Contractor must assess potential risks before the commencement of physical works at the site. While assessing potential risks, employers should consider if and when their workers may encounter someone infected with COVID19 in the course of their duties. Employers should also determine if workers could be exposed to environments (e.g., work sites) or materials (e.g., laboratory samples, waste) contaminated with the virus.

Depending on the work setting, employers may also rely on the identification of sick individuals who have signs, symptoms, and/or a history of travel to COVID-19-affected areas or HPA quarantined locations, to help identify exposure risks for workers and implement appropriate control measures. It is also possible that someone may have been in close contact (within about 6 feet) with someone with COVID-19 in their community and, thus, may have had exposure.

6.3 Workplace Mapping

In the event of an employee being confirmed as having COVID-19, those who are potentially affected need to be quickly identified.

Employers should implement processes to record the schedule and work locations for employees (including contractors), that enables tracing of those who have come into contact with the confirmed case.

The record should include:

- Day and time work was undertaken
- Members of teams that worked together
- Specific work area on the construction site
- Any breaks taken, including time and location.

Movement between sites, or areas within large sites, should be minimised as much as possible. Where attending multiple sites is necessary movement between sites should be recorded in the workplace mapping.

The Contractor must also ensure that all staff, workers and other relevant personnel have installed the “**Trace Ekee**” app, developed and recommended by Government of Maldives for contact tracing of COVID-19 patients.

6.4 Physical Distancing and Occupancy Limits

Before initiating or resuming work at the site, the Contractor must ensure that the workers practice physical distancing of 6 feet wherever possible. Contractors should also consider each work task and whether there is a safe alternative way to undertake the work with an increased distance between employees.

- Mark safe distances in work, transit and break areas (eg 6ft safe distance floor and wall markers).
- Consider different shift patterns to minimise the number of employees onsite (eg AM/PM shifts).
- Stagger start times, breaks and finish times to avoid congestion in high traffic areas and minimise employees coming into contact with each other as they move around the site.
- Plan for how physical distancing will be maintained during inclement weather (eg use of lunch or crib rooms and amenities).
- Install temporary physical barriers (eg fences, screens) between work areas, where appropriate. (See 3.5 Engineering Controls for more information)



Where it is not possible to undertake work tasks and maintain physical distancing, other control measures need to be implemented. For example:

- Minimise the number of person to person interactions that need to be completed within 6 feet.
- Minimise the number of individuals involved in activities that need to occur within 6 feet of each other.
- Provide personal protective equipment (PPE) (eg gloves, masks, glasses).

More information about the safe use of PPE is given in section 3.7 PPE and Appendix J

Where essential work activities need to be undertaken in restricted spaces (eg lift shafts, personnel hoists, lifts), the number of employees working in the space should be minimised.

6.5 Engineering Controls

Engineering controls involve isolating employees from work-related hazards. In workplaces where they are appropriate, these types of controls reduce exposure to hazards without relying on worker behaviour and can be the most cost-effective solution to implement. Some Engineering Controls the Contractor can implement for COVID-19 include:

- Installing high-efficiency air filters.
- Increasing ventilation rates in the work environment.
- Installing physical barriers, such as clear plastic sneeze guards.

In the indoor construction environment, when work is determined to be essential or emergency work, and a person (e.g., coworker, visitor, resident, subcontractor) suspected of having or known to have COVID-19 is present at the worksite in close proximity to where workers would be working:

- Use closed doors and walls, whenever feasible, as physical barriers to separate workers from any individuals experiencing signs and/or symptoms consistent with COVID-19.
- Consider erecting plastic sheeting barriers when workers need to occupy specific areas of an indoor work site where they are in close contact (less than 6 feet) with someone suspected of having or known to have COVID-19.
- During the COVID-19 pandemic, periodically reassess engineering controls, as well as work practices and administrative controls (See Section 3.6 Administrative Controls and Rules) to identify any changes that can be made to decrease the need for face coverings and other personal protective equipment (PPE) ordinarily used for work activities that involve exposure to hazardous substances. This can help conserve PPE that is in short supply or needs to be diverted to activities associated with higher COVID19 exposure risks.

In addition, the Contractor must train construction workers on:

- The signs and symptoms of COVID-19 and an explanation of how the disease is potentially spread, including the fact that infected people can spread the virus even if they do not have symptoms.
- All policies and procedures that are applicable to the employee's duties as they relate to potential exposures to SARS-CoV-2. It is helpful to provide employees with a written copy of those standard operating procedures.
- Information on appropriate social distancing and hygiene practices.

6.6 Administrative Controls and Rules

Administrative controls require action by the worker or employer. Typically, administrative controls are changes in work policy or procedures to reduce or minimize exposure to a COVID19. Contractor must ensure that these Administrative Controls are implemented at the work site:

- Encouraging sick workers to stay at home.
- Minimizing contact among workers, clients, and customers by replacing face-to-face meetings with virtual communications and implementing telework if feasible.
- Establishing alternating days or extra shifts that reduce the total number of employees in a facility at a given time, allowing them to maintain distance from one another while maintaining a full onsite work week.
- Follow HPA guidelines for preventing the spread of COVID-19 infection and discontinue nonessential travel to locations with ongoing COVID-19 outbreaks.
- Developing emergency communications plans, including a forum for answering workers' concerns and internet-based communications, if feasible.
- Providing workers with up-to-date education and training on COVID-19 risk factors and protective behaviours (e.g., cough etiquette and care of PPE).
- Training workers who need to use protective clothing and equipment how to put it on, use/wear it, and take it off correctly, including in the context of their current and potential duties. Training material should be easy to understand and available in the appropriate language and literacy level for all workers. (See Appendix J)

6.7 Personal Protective Equipment (PPE)

Contractors must provide information, instruction and training on the safe use, decontamination, maintenance, and disposal of any PPE provided. Any PPE provided needs to be practical for the work environment (eg allowing the necessary visibility and mobility) and properly decontaminated or disposed off at the end of every shift.

Contractor should also monitor and encourage correct use of PPE, for example by providing information on posters and digital screens about:

- Washing or sanitising hands before putting PPE on, and putting face protection on before gloves. (See Appendix F and J)
- Removing gloves before face protection, washing or sanitising hands after removing PPE and decontaminating or disposing off used PPE safely. (use of enclosed bins for the disposal used PPE) (See Appendix F and J)

More information on Hand Hygiene and Face Coverings can be found in Appendices F and J respectively.

6.8 Wash Stations

All site-specific projects with outside construction sites MUST install Wash Stations.

- All worksites should have access to toilet and hand washing facility with soap.
- Providing hand cleaning facilities at entrances and exits. This should be soap and water wherever possible or hand sanitiser if water is not available
- All onsite workers must help to maintain and keep stations clean
- Ensure that the handwashing soap is refilled regularly.
- Enclosed dustbins must be placed next to the hand wash station for discarding of used tissues/towels with regular removal and disposal facility (end of each day)

7 WORK-SITE PROTECTIVE PRACTICES

7.1 General Safety Rules

- At the start of each shift, confirm with all employees that they are healthy and inform all workers of reusable and disposable PPE.
- Outside person should be strictly prohibited at worksite
- All construction workers will be required to wear cut-resistant gloves or the equivalent.
- Use of eye protection (reusable safety goggles/face shields) is recommended. The supply of eye protection equipment to the workers is considered as a standard part of PPE during construction works.
- In work conditions where required social distancing is impossible to achieve, such employees shall be supplied with standard face mask, gloves, and eye protection.
- The Contractor will divide workers/staff into two (2) groups where possible so that projects can continue working effectively in the event that one of the divided teams is required to quarantine.
- All employees shall drive to work site in a single occupant vehicle. Employees are encouraged to minimize ride-sharing. While in vehicle, employees must ensure adequate ventilation and consider the use of face coverings.
- When entering a machine or vehicle which you are not sure you were the last person to enter, make sure that you wipe down the interior and door handles with disinfectant (see Appendix G for dilution of disinfectant) prior to entry. Adequate quantity of the disinfectant shall be provided by the Contractor at all such site-specific locations.
- Workers should maintain separation of 6' from each other.

- Multi person activities will be limited where feasible (two persons lifting activities)
- Gathering places on the site such as sheds and/or break areas will be eliminated, and instead small break areas will be used with seating limited to ensure social distancing.
- Contact the cleaning person of the worksite and ensure proper COVID-19 sanitation processes. Increase cleaning/disinfection visits to at least 2 times a day. Cleaning person(s) to be provided with gloves, gown and face mask for each cycle of cleaning. The Contractor shall make available adequate supply of PPE and chemicals while the threat of COVID-19 continues.
- Clean all high contact surfaces a minimum of twice a day in order to minimize the spread of germs in areas that people touch frequently. This includes but is not limited to desks, laptops and vehicles
- Maintain your good health by getting adequate sleep; eating a balanced, healthy diet, avoid alcohol; and consume plenty of fluids.
- Continuation of works in construction project with workers available on site and no workers to be brought in from outside
- The site offices shall have adequate ventilation. The air conditioning or ventilation systems installed at the site offices would have high-efficiency air filters to reduce the risk of infection. The frequency of air changes may be increased for areas where close personal proximity cannot be fully prevented such as control rooms, elevators, waiting rooms, etc.
- Employees should limit the use of co-workers' tools and equipment. To the extent tools must be shared, the Contractor will provide alcohol-based wipes to clean tools before and after use. When cleaning tools and equipment, consult manufacturing recommendations for proper cleaning techniques and restrictions.
- All in-person meetings will be limited. To the extent possible, meetings will be conducted by telephone.
- Employees are encouraged to use engineering and work practice controls to minimize dust. Such controls include the use of water delivery and dust collection systems, as well as limiting exposure time.
- All staff, workers, supervisors, managers and visitors must wear a face cover at the site at all times. (See Appendix J)
- In lieu of using a common source of drinking water, such as a cooler, employees should use individual water bottles. Use of tobacco products (chewing tobacco, smoking), vaping, etc., should be avoided.
- The Contractor must keep records of locations workers had visited and lived immediately before and during construction.

7.2 Site Visitors

- The number of visitors to the job site, including the trailer or office, will be limited to only those necessary for the work.
- All visitors will be screened using the 'Visitor and Employee Health Screening Checklist' in advance of arriving on the job site. If the visitor answers "yes" to any questions in the checklist, he/she should not be permitted to access the jobsite. (See Appendix E)
- Contractor may determine that taking visitor temperatures at worksites is appropriate and restricting access based upon temperature readings. As an alternative to taking temperatures at the worksite, Contractor may request visitors take their own temperatures prior to coming to the worksite. (See Appendix A for more information.)
- Site deliveries will be permitted but should be properly coordinated with the minimal contact. Delivery personnel should remain in their vehicles if at all possible. Use where possible, cashless transactions and avoid hand contact.
- Site Visitors must wear face coverings at all times within the site as specified in Appendix J.

8 CLEANING AND DISINFECTING

Cleaning means physically removing germs, dirt and organic matter from surfaces. Cleaning alone does not kill germs, but by reducing the numbers of germs on surfaces, cleaning helps to reduce the risk of spreading infection.

Disinfection means using chemicals to kill germs on surfaces. This process does not necessarily clean dirty surfaces or remove germs, but by killing germs that remain on surfaces after cleaning, disinfection further reduces the risk of spreading infection. Cleaning before disinfection is very important as organic matter and dirt can reduce the ability of disinfectants to kill germs.

Transmission or spread of coronavirus occurs much more commonly through direct contact with respiratory droplets than through contaminated objects and surfaces. The risk of catching coronavirus when cleaning is substantially lower.

8.1 Use of Disinfectants

Where possible, use a disinfectant for which the manufacturer claims antiviral activity (meaning it can kill viruses). Chlorine-based (bleach) disinfectants are one product that is commonly used. Other options include common household disinfectants or alcohol solutions with at least 70% alcohol (for example, methylated spirits). Follow the manufacturer's instructions for appropriate dilution and use. Appendix G provides dilution instructions when using bleach solutions

The Contractor will ensure that any disinfection shall be conducted using one of the following:

- Common HPA-approved disinfectant; (COVID-19 Quick Reference Guidelines*)
- Alcohol solution with at least 60% alcohol; or
- Diluted Sodium Hypochlorite as per HPA recommendation* (See Appendix G)

* <https://covid19.health.gov.mv/wp-content/uploads/2020/05/COVID-19-QR-SOPs-v9-first-revision.pdf>

The Contractor must maintain Safety Data Sheets of all disinfectants used on site. Cleaning person(s) to be provided with gloves, gown and face mask for each cycle of cleaning.

8.2 Routine Cleaning and Disinfection

Workplaces should routinely (at least daily) clean frequently touched surfaces. Also, clean surfaces and fittings when visibly soiled and immediately after any spillage. Where available, a disinfectant may be used following thorough cleaning

Each worksite should have enhanced cleaning and disinfection procedures that are posted and shared including sheds, gates, equipment, vehicles, etc. and shall be posted at all entry points to the sites, and throughout the project site. These include common areas and high touch points like:

- Taps and washing facilities
- Toilet flush and seats
- Door handles and push plates
- Handrails on staircases and corridors
- Lift and hoist controls
- Machinery and equipment controls
- Food preparation and eating surfaces
- Telephone equipment / mobiles
- Keyboards, photocopiers and other office equipment
- tabletops, light switches, desks, toilets, taps, remotes, cupboard handles etc
- other equipment and materials relevant to construction and building sites

The Contractor must ensure regular housekeeping practices, which includes cleaning and disinfecting frequently used tools and equipment, and other elements of the work environment, where possible. Employees should regularly do the same in their assigned work areas.

- Jobsite trailers and break/lunchroom areas must be cleaned at least once per day. Employees performing cleaning will be issued proper personal protective equipment ("PPE"), such as nitrile, latex, or vinyl gloves and gowns, as recommended by the HPA.
- Any trash collected from the jobsite must be changed frequently by someone wearing nitrile, latex, or vinyl gloves.
- Any portable jobsite toilets should be cleaned by the leasing contractor at least twice per week and disinfected on the inside. The Contractor will ensure that hand sanitizer dispensers are always filled. Frequently touched items (i.e., door pulls and toilet seats) will be disinfected frequently.

- Vehicles and equipment/tools should be cleaned at least once per day and before change in operator or rider.

Gloves are recommended when cleaning and disinfecting. Use of eye protection, masks and gowns is not required when undertaking routine cleaning. Always follow the manufacturer's advice regarding use of PPE when using disinfectants. Re-usable PPE should be thoroughly cleaned after use and not shared between workers.

9 JOB SITE EXPOSURE SITUATIONS

In the event of a suspected case of COVID19, the workers must inform their supervisors and the supervisors/contractor must assist the worker to contact the HPA at their toll free number **1676**. HPA will provide further instructions and inform if testing is required. If tested positive for COVID-19 HPA will contact the individual to identify the close contacts and the causal contacts. If the employee has attended their workplace while they were infectious and had close contact with other employees, HPA will contact the Contractor. Further information is provided below.

9.1 Employees Exhibiting COVID-19 Symptoms

If an employee/worker exhibits COVID-19 symptoms (See Appendix C), the employee must immediately contact HPA at 1676 and follow their instructions and must remain at home until he or she is symptom free for 72 hours (3 full days) without the use of fever-reducing or other symptom-altering medicines (e.g., Panadol, cough suppressants). The Contractor will similarly require an employee that reports to work with symptoms to return home until they are symptom free for 72 hour (3 full days). To the extent practical, employees are required to obtain a doctor's note clearing them to return to work. The Contractor must ensure that the employee/worker is compensated for the duration which he/she was out of work due to this.

9.2 Employee Tests Positive for COVID-19

An employee/worker that tests positive for COVID-19 needs to follow the instructions given by HPA and needs to be directed to self-quarantine away from work. Employees that test positive can only return back to work once HPA confirms that the individual is tested negative and fully recovered from COVID19. Employees that test positive and have been hospitalized may return to work when directed to do so by their medical care provider. The Contractor will require employees to provide documentation clearing their return to work. The Contractor must ensure that the employee/worker is compensated for the duration which he/she was out of work due to COVID19.

9.3 Employee Has Close Contact with a COVID-19 Positive Individual

Employees that have come into close contact with a confirmed-positive COVID-19 individual (co-worker or otherwise), will need to inform HPA at 1676 and follow their instructions. If the employee is not tested for COVID19, the employee must be directed to self-quarantine for 14 days from the last date of close contact with the carrier. Close contact is defined as six (6) feet for a prolonged period of time.

If the Contractor learns that an employee has tested positive, the Contractor will conduct an investigation into co-workers that may have had close contact with the confirmed-positive employee in the prior 14 days and direct those individuals that have had close contact with the confirmed-positive to self-quarantine for 14 days from the last date of close contact with the carrier. If an employee learns that he or she has come into close contact with a confirmed-positive individual outside of the workplace, he/she must alert a manager or supervisor of the close contact.

The Contractor must ensure that the employee/worker is compensated for the duration which he/she was out of work due to COVID19.

10 TRAINING AND AWARENESS

Contractor to ensure all workers get training on the requirements of this H&S Plan before start of any construction activity. During construction period frequent visual and verbal reminders to workers can improve compliance with hand hygiene practices and thus reduce rates of infection. Posters should be displayed at work site and labour camps regarding Hand Hygiene and Face Coverings. (See Appendix F and J)

The Contractor must also ensure all staff, workers and other relevant personnel have installed the “**Trace Ekee**” app, developed and recommended by Government of Maldives for contact tracing of COVID-19 patients.

A copy of this H&S Plan along with all appendices should be kept at the work site and labour camp at all times.

11 IMPORTANT CONTACTS

Contractor must provide an emergency contact number of a supervisor or a medical personnel at work site and labour camp for reporting COVID-19 symptoms.

Contact the Health Protection Agency (HPA) at the 24/7 toll free number **1676** for all queries including:

- Case Reporting
- General Inquiries

For Medical Emergencies, contact **102** and if assistance is required to transfer the patient to the ambulance, please contact Fire and Rescue number **118**

Contact Incident Command Posts (ICP) operated by City Council below for support services for households/quarters under monitoring and urgent support service requests from any other household/quarters.

- Thilafushi ICP - 9300924
- Vilimale ICP - 9300917
- Hulhumale ICP - 9300918
- Male' ICP - 9300904, 9300908

Contact any number below for Psychosocial Support Services:

- 3337892
- 7897892
- 7567030

A table of important contacts are listed in Appendix D. Online doctor consultation services by medical facilities are provided on Appendix H.

12 CONFIDENTIALITY

Except for circumstances in which the Contractor is legally required to report workplace occurrences of communicable disease, the confidentiality of all medical conditions will be maintained in accordance with applicable laws of Maldives and to the extent practical under the circumstances. When it is required, the number of persons who will be informed of an employee's condition will be kept at the minimum needed not only to comply with legally-required reporting, but also to assure proper care of the employee and to detect situations where the potential for transmission may increase. A sample notice to employees is attached to this Plan (Appendix B).

The Contractor reserves the right to inform other employees that a co-worker (without disclosing the person's name) has been diagnosed with COVID-19 if the other employees might have been exposed to the disease so the employees may take measures to protect their own health.

APPENDIX A – Temperature Screening Guidance

General Considerations¹

- Certain local jurisdictions have recommended or required employers to conduct temperature screenings of employees as they enter the worksite. Any applicable federal, state, or local requirements on employee temperature screenings should be consulted prior to performing them.
- Temperature screenings must be conducted consistently, professionally, and with proper training for those conducting the checks. Such checks must be uniformly and non-discriminatorily conducted on all employees (as well as contractors, vendors, customers, and/or visitors, if they will also be screened).
- Any information obtained from temperature screenings should be stored securely with access limited to those with a business need to know. It is essential to have proper documentation in the event that an individual needs to be excluded from the worksite based on the results of their temperature screening. If excluding individuals from a worksite based upon temperature, a set temperature should be established, based upon public health recommendations. Many employers have set the temperature required for exclusion at 100.4 degrees Fahrenheit or above.
- Wage protocols and procedures to account for any potential time spent waiting in line to be screened must also be considered. This is particularly important at worksites where there may be numerous workers reporting to their shift at the same time and only one or two individuals conducting the temperature screenings. Any existing Collective Bargaining Agreements should also be considered.

Screening

- The temperature screening can be conducted by the employer, at the worksite, when the employee arrives to report for their shift.
- Recommended type of temperature screeners:
 - *Infrared thermometers.* Infrared thermometers are the most practicable and safe option for conducting screening at work. However, the individual conducting such temperature screening must still be provided with appropriate protective gear. If the infrared thermometer does not allow the individual conducting the screening to stand at least six feet from the employee being screened, the following protective gear is recommended:

¹ Temperature screening involves numerous, difficult legal issues. This Appendix does not represent a comprehensive discussion of all of those issues. It is intended to provide some basic guidance to contractors who might be performing screening. Contractors should consult with legal counsel before implementing a screening program.

- The individual conducting the screening should wear a face covering and gloves. If at all possible, the employee being screened should wear a face covering as well during the check.
- If the employee is not wearing a face covering, the individual conducting the screening should wear a gown and eye protection in addition to a face covering and gloves.

If the individual conducting the screening is able to stand six feet or more from the employee being screened, no additional protective gear is necessary, though a face mask and gloves are recommended.

APPENDIX B – Employee Notification

DATE: [DATE]

TO: [CLOSE CONTACT EMPLOYEE]

FROM:[COMPANY REP]

We have been informed by one of our [employees/customer/vendor/etc] working at [SITE] that he/she has a confirmed case of COVID-19, commonly known as “Coronavirus,” based on test results obtained on [DATE]. Per company policy, this [employee/customer/vendor/etc] has been directed to self-quarantine until permitted to return to work.

We are alerting you to this development because, based on the Company’s investigation, we believe that you may have come into contact with the confirmed-positive case, on or about [DATE]. As a critical infrastructure employee, [INSERT COMPANY NAME] will permit you to work provided you remain asymptomatic. In addition, we are implementing the following practices:

- Measuring temperature of employees before they enter the worksite;
- Regularly monitoring asymptomatic employees;
- Ensuring employees maintain social distancing as work duties permit; and
- Routinely disinfecting workspaces.

You are also required to wear a face covering at all times while at the worksite for at least 14 days. Please inform [COMPANY CONTACT] if any of the following occur to you during the next 14 days: you experience flu-like symptoms, including fever, cough, sneezing, or sore throat; or you test positive for COVID-19.

We also want to take this opportunity to remind you that one of our core values as a company is respect for and among our employees [or customers]. We will treat information regarding the identity of employees [or customers] with suspected or confirmed cases of COVID-19 as confidential to the extent practicable and will comply with applicable laws regarding the handling of such information. Further, per Company policy, we will not tolerate harassment of, or discrimination or retaliation against, employees [or anyone].

Please contact [COMPANY CONTACT AWARE OF APPROPRIATE PROTOCOLS] at [PHONE NUMBER] if you have any questions or concerns.

For more information about COVID-19, please visit the HPA website at: <https://covid19.health.gov.mv/>

APPENDIX C – Information Related to COVID19

What is COVID-19?

The novel coronavirus, COVID-19 is one of seven types of known human coronaviruses. COVID-19, like the MERS and SARS coronaviruses, likely evolved from a virus previously found in animals. The remaining known coronaviruses cause a significant percentage of colds in adults and children, and these are not a serious threat for otherwise healthy adults. Patients with confirmed COVID-19 infection have reportedly had mild to severe respiratory illness with symptoms such as fever, cough, and shortness of breath.

According to the Health Protection Agency of Maldives (HPA), the virus can cause mild to severe respiratory illness. The outbreak began in Wuhan, Hubei Province, China, and has spread to a growing number of other countries—including the Maldives.

How is COVID-19 Spread?

COVID-19, like other viruses, can spread between people. Infected people can spread COVID-19 through their respiratory secretions, especially when they cough or sneeze. According to the HPA, spread from person-to-person is most likely among close contacts (about 6 feet). Person-to-person spread is thought to occur mainly via respiratory droplets produced when an infected person coughs or sneezes, like how influenza and other respiratory pathogens spread. These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs. It is currently unclear if a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly their eyes.

In assessing potential hazards, employers should consider whether their workers may encounter someone infected with COVID-19 in the course of their duties. Employers should also determine if workers could be exposed to environments (e.g., worksites) or materials (e.g., laboratory samples, waste) contaminated with the virus.

Depending on the work setting, employers may also rely on identification of sick individuals who have signs, symptoms, and/or a history of travel to COVID-19-affected areas that indicate potential infection with the virus, in order to help identify exposure risks for workers and implement appropriate control measures.

There is much more to learn about the transmissibility, severity, and other features associated with COVID-19, and investigations are ongoing.

APPENDIX D – Important Contacts

Medical Emergencies	102
Fire and Rescue	118
Health Protection Agency (HPA) For all queries including: • Case Reporting • General Inquiries	1676
Contact Incident Command Posts (ICP) Operated by City Council below for support services for households/quarters under monitoring and urgent support service requests from any other household/quarters.	Thilafushi ICP - 9300924 Vilimale ICP - 9300917 Hulhumale ICP - 9300918 Male' ICP - 9300904, 9300908
Psychosocial Support Services	3337892 7897892 7567030
Greater Male Industrial Zone Limited (GMIZL)	3307513 6642505
Project Management Unit	Safeguard Specialist: 7785277

APPENDIX E – Daily Health Screening Checklist

Greater Male Environmental Improvement and Waste Management Project (GMEIWMP)

CONDUCT HEALTH SCREENING EACH TIME EMPLOYEES OR VISITORS ENTER THE SITE.

You may also opt to conduct temperature screening if it can be done with proper social distancing, protection, and hygiene protocols. However, temperature screening is not required.

If a worker or visitor answers “Yes” to any of the screening questions or has a measured temperature above 100.4°F, they should be advised to go home, stay away from other people, and contact their health care provider.

Visitor and Employee Health Screening Checklist

Have you had any of the following symptoms since your last day at work or the last time you were here that you cannot attribute to another health condition?

Please answer “Yes” or “No” to each question. Do you have:

- ☐ Fever (100.4°F or higher), or feeling feverish?
- ☐ Chills?
- ☐ A new cough?
- ☐ Shortness of breath?
- ☐ A new sore throat?
- ☐ New muscle aches?
- ☐ New headache?
- ☐ New loss of smell or taste?

How to Handwash?

WASH HANDS WHEN VISIBLY SOILED! OTHERWISE, USE HANDRUB



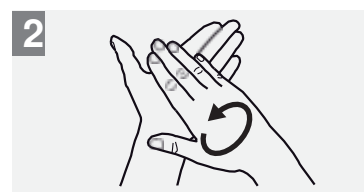
Duration of the entire procedure: 40-60 seconds



Wet hands with water;



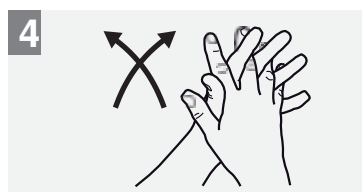
Apply enough soap to cover all hand surfaces;



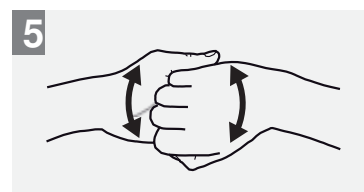
Rub hands palm to palm;



Right palm over left dorsum with interlaced fingers and vice versa;



Palm to palm with fingers interlaced;



Backs of fingers to opposing palms with fingers interlocked;



Rotational rubbing of left thumb clasped in right palm and vice versa;



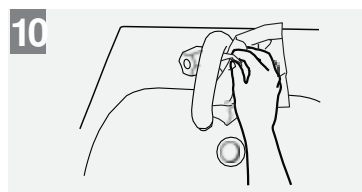
Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



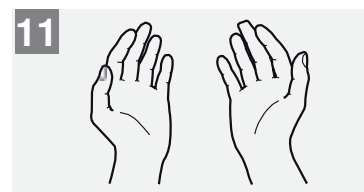
Rinse hands with water;



Dry hands thoroughly with a single use towel;



Use towel to turn off faucet;



Your hands are now safe.



World Health Organization

Patient Safety

A World Alliance for Safer Health Care

SAVE LIVES
Clean Your Hands

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May 2009

How to Handrub?

RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED



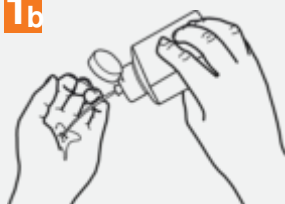
Duration of the entire procedure: 20-30 seconds

1a

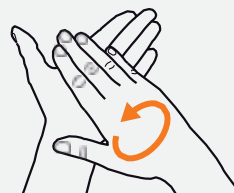


Apply a palmful of the product in a cupped hand, covering all surfaces;

1b

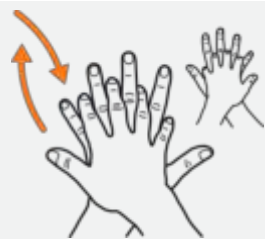


2



Rub hands palm to palm;

3



Right palm over left dorsum with interlaced fingers and vice versa;

4



Palm to palm with fingers interlaced;

5



Backs of fingers to opposing palms with fingers interlocked;

6



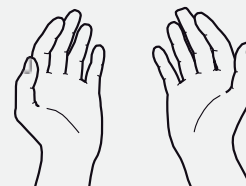
Rotational rubbing of left thumb clasped in right palm and vice versa;

7



Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;

8



Once dry, your hands are safe.



World Health Organization

Patient Safety

A World Alliance for Safer Health Care

SAVE LIVES

Clean Your Hands

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this document. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.
WHO acknowledges the Hôpitaux Universitaires de Genève (HUG), in particular the members of the Infection Control Programme, for their active participation in developing this material.

May 2009

APPENDIX G – Dilution of Disinfectant

Household bleach comes in a variety of strengths. The concentration of active ingredient — hypochlorous acid — can be found on the product label. The recommended concentration of Sodium Hypochlorite (bleach) is **0.1% (1000ppm)** for non-healthcare settings.

Recipes to achieve a 1000 ppm (0.1%) bleach solution

Original strength of bleach		Disinfectant recipe		Volume in standard 10L bucket
%	Parts per million	Parts of bleach	Parts of water	
1	10,000	1	9	1000 mL
2	20,000	1	19	500 mL
3	30,000	1	29	333 mL
4	40,000	1	39	250 mL
5	50,000	1	49	200 mL

<https://www.who.int/publications-detail/cleaning-and-disinfection-of-environmental-surfaces-inthe-context-of-covid-19>

APPENDIX H – Online Doctor Consultation Services

ONLINE CONSULTATION			
PROVIDER NAME	CONTACT NUMBER	PROVIDER TYPE	ATOLL / ISLAND
ADK Hospital	1440 / 3313553	Hospital	K. Male'
Senahiya Hospital	7969897	Hospital	K. Male'
Medica Hospital	9748013	Hospital	K. Male'
Eye Care Hospital	7201026	Hospital	K. Male'
Primax Medi-Care	3330511	Clinic	K. Male'
Eye Care Clinic	7201026	Clinic	K. Male'
Family Care Clinic & Scan Center	7468046	Clinic	K. Male'
Uro Medical Care	7776689	Clinic	K. Male'
Central Clinic	7893464	Clinic	K. Male'
Advance Medical Clinic	7947778	Clinic	K. Male'
Central Medical Center	7987781	Clinic	K. Male'
Mednova Medical Centre	7999736	Clinic	K. Male'
Kulunu Medical Center	9939797	Clinic	K. Male'
Eve Clinic	3300788 / 7900788	Clinic	K. Male'
First Care Medical Center	3329449 / 7969449	Clinic	K. Male'
Institute of Mental Well-Being	7897892 / 7226667	Clinic	K. Male'
Image Center	9477293 / 9477294 / 9477311	Clinic	K. Male'
Eye Care Clinic Hulhumale' Branch	7201026	Clinic	K Hulhumale'

Unique Dental	7909017	Clinic	K.Hulhumale'
Care Trust Multi Specialty Clinic	7969001	Clinic	K.Hulhumale'
Pro Care Clinic and Dental Center	9977758 / 9969920 / 9504051	Clinic	ADH Mahibadhoo
Dr Jihad's Dental and Medical Center	7779794	Clinic	K. Male
Imperial Medical Center	9471414	Clinic	K. Male
Maldicare	7705353 / 3331590	Clinic	K. Male
Faruvaa Clinic	7950535	Clinic	K. Male
Master Dental Care Center	9410090 / 9410096	Clinic	K. Male
Master Dental Care Centro	9410090 / 9410096	Clinic	K. Hulhumale'

APPENDIX I – Initial Health Screening Checklist

Greater Male Environmental Improvement and Waste Management Project (GMEIWMP)

CONDUCT THIS HEALTH SCREENING BEFORE THE WORK INITIATE AT THE SITE

If a worker or visitor answers “Yes” to any of the screening questions, they should be advised to stay home as they are of high risk for severe illness from COVID19.

Employee Initial Health Screening Checklist

Please answer “Yes” or “No” to each question. Do you have:

- ☐ Are you 60 years and older?
- ☐ Have you been confirmed positive for COVID-19?
- ☐ Are you currently experiencing, or recently experienced, any acute respiratory illness symptoms such as fever, cough, or shortness of breath?
- ☐ Have you been in close contact with any persons who have been confirmed positive for COVID-19 and are also exhibiting acute respiratory illness symptoms?
- ☐ Have you been in close contact with any persons who have travelled and are also exhibiting acute respiratory illness symptoms?
- ☐ Do you have any of the underlying medical conditions:
 - ☐ Severe Asthma or chronic respiratory Disease
 - ☐ Cardiovascular Disease
 - ☐ Cancer
 - ☐ Diabetes
 - ☐ Cardiovascular Disease
 - ☐ Chronic Liver Disease
 - ☐ Chronic Kidney Disease
 - ☐ Any other underlying medical condition, please specify:

APPENDIX J – Face Coverings

While construction work could generally be considered “low risk” for viral transmission, some construction tasks or activities may involve working with others in proximity closer than six feet, including sitting in the same vehicle, and therefore might be considered as “medium risk”.

Due to this, it is important to implement a face covering policy for certain work activities for the foreseeable future, including those situations where (1) it is mandated by the government rule, or (2) employees must work in proximity of six (6) feet from other employees. A face covering is a cloth, bandana, or other type of material that covers a person’s nose and mouth. Disposable surgical masks are recommended, however if not available, cloth face coverings can be used. The five criteria for “cloth face coverings” is given below:

- fit snugly but comfortably against the side of the face;
- be secured with ties or ear loops;
- include multiple layers of fabric;
- allow for breathing without restriction; and
- be able to be laundered and machine-dried without damage or change to shape.

If disposable surgical masks are being used by workers, make sure the mask is disposed off safely in an enclosed bin and wash hands after. Use of a face covering is not a substitute for other workplace preventative techniques that are outlined in this Plan.

Wear your Face Covering Correctly

- Wash your hands before putting on your face covering
- Put it over your nose and mouth and secure it under your chin
- Try to fit it snugly against the sides of your face
- Make sure you can breathe easily

Use the Face Covering to Protect Others:

- Wear a face covering to help protect others in case you’re infected but don’t have symptoms
- Keep the covering on your face the entire time you’re in public
- Don’t put the covering around your neck or up on your forehead
- Don’t touch the face covering, and, if you do, wash your hands

Take Off Your Cloth Face Covering Carefully, When You’re Home

- Untie the strings behind your head or stretch the ear loops
- Handle only by the ear loops or ties
- Fold outside corners together
- Place covering in the washing machine (learn more about how to wash cloth face coverings)
- Be careful not to touch your eyes, nose, and mouth when removing and wash hands immediately after removing.



World Health
Organization

How to put on, use, take off and dispose of a mask

1



Before putting on a mask, wash hands with alcohol-based hand rub or soap and water

2



Cover mouth and nose with mask and make sure there are no gaps between your face and the mask

Avoid touching the mask while using it; if you do, clean your hands with alcohol-based hand rub or soap and water

3



Replace the mask with a new one as soon as it is damp and do not re-use single-use masks

4



To remove the mask: remove it from behind (do not touch the front of mask); discard immediately in a closed bin; wash hands with alcohol-based hand rub or soap and water

CORONAVIRUS DISEASE 2019 (COVID-19)

Your cloth face covering protects them.
Their cloth face covering protects you.



cdc.gov/coronavirus

CS316W3-A April 10, 2020 1:03 PM

===== END =====



**Wash your
hands.**



**Stay home
when sick.**



**Cover your
cough.**

THILAFUSHI HARBOUR REHABILITATION PROJECT

Monitoring Report 02

January 2021

PREPARED BY:
MALDIVES TRANSPORT AND CONTRACTING COMPANY PVT LTD

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4. Monitoring locations 3

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1. Introduction

This monitoring report is prepared as part of the Environmental Protection and Preservation Act, law 4/93 and as a requirement of the EIA regulation 2012 which mandates that a proper environment impact assessment is undertaken for development projects and a monitoring program be undertaken to assess the impact on the environment. The EIA for the project was prepared by Ahmed Jameel (EIA P07/2007) & Abdul Aleem (EIA P03/2019) in December 2019. The project involves harbour rehabilitation, waste processing, administrative building, workshop and civil works for C & D plant, recycling yard and ELV dismantling workshop at K. Thilafushi.



Figure 1

2. Purpose

The purpose of this monitoring report is to ensure that the environmental thresholds, as specified, in the regulations are not surpassed during the project. This will ascertain that the mitigation measures recommended in the EIA are effective and whether necessary actions need to be taken to further improve the mitigation measures.

3. Methods

The monitoring methods prescribed in the monitoring section of the EIA Report was followed during the collection of data for this report.

Noise level

Noise levels were measured at the 5 locations sampled in the EIA. Measurements were taken during daytime from 4:00pm to 5:00pm.

Marine Water Quality

Water quality parameters for the marine environment were measured in situ by using YSI multi-parameter water quality meter. The parameters that were measured are in table 1.

Parameter	Unit
Conductivity	μS/cm
Salinity	psu
Total Dissolved Solids	mg/L
Temperature	°C
pH	-
Turbidity	FNU
Total Suspended Solids	mg/L
Dissolved Oxygen	mg/L

Table 1: Parameters measures for marine water

Ground water quality

Ground water samples were taken in 800ml glass bottles from 4 locations to be tested at MWSC laboratory. The tested parameters are detailed in table 2.

Parameter	Unit
Conductivity	μS/cm
Total Dissolved Solids	mg/L
pH	-
Turbidity	FNU
Total Petroleum Hydrocarbons	mg/L
Total coliforms	mg/L
Lead	mg/L
Phosphate	mg/L
Nitrate	mg/L
Manganese	mg/L
Iron	mg/L
Chloride	mg/L

Table 2: Parameters measured for ground water

4. Monitoring locations

Water quality



Figure 2: Water sampling locations

Water samples for environmental monitoring were taken from the locations marked in figure 2. Marine water (SW) was sampled from 7 locations and ground water (GW) was sampled from 4 locations.

Noise level



Figure 3: Noise sampling locations

Noise levels were measures at the locations marked in figure 3.

5. Analysis and Results

Marine water quality

The samples taken from the sites SW1 to SW6, which were surrounding Thilafushi, appeared clear with particles. However, water at SW7 was a pale green colour (locations marked in figure 2). The water was tested in situ for pH, temperature, turbidity, total suspended solids, salinity, and dissolved oxygen. The results did not vary much and pH, temperature, turbidity and TSS remained within the thresholds recommended by EPA.

Salinity and DO are in the usual ranges in the Maldives as well. Salinity measurements in the sea water in Maldives usually range between 33 - 45‰ (Stoddart, 1966, as cited in Jameel & Aleem, 2019). Dissolved oxygen in the sea water ranges between 4 – 8mg/L (Naeem & Sattar, 2007).

The values are similar to the recorded values from November 2020.

The table below outlines the results of the water tests.

Parameter	Optimum Range	SW1	SW2	SW3	SW4	SW5	SW6	SW7
Physical Appearance	-	Clear with Particles	Clear with Particles	Clear with Particles	Clear with Particles	Clear with Particles	Clear with Particles	Pale green with particles
pH	6.0 - 9.0 (ANZECC, 2000)	8.5	8.43	8.41	8.45	8.45	8.52	8.49
Temperature (°C)	18 - 32 (ANZECC, 2000)	29.6	29.51	29.47	29.57	29.65	30.68	30.2
Turbidity (NTU)	<3 (EPA)	0.25	0.09	0.08	0.05	0.04	1.5	1.89
Total Suspended Solids	<5 (EPA)	<5	<5	<5	<5	<5	<5	<5
Salinity (‰)	-	34.94	34.95	34.93	34.97	34.99	35.00	34.81
DO (mg/L)	-	5.98	6.07	6.39	6.30	6.10	7.00	7.23

Table 3: Results for samples SW1 - SW7

Ground water quality

Ground water samples were taken from locations GW1 to GW4, as seen in figure 2. Samples were sent to MWSC to be tested for conductivity, pH, total dissolved solids, turbidity, total petroleum hydrocarbons, total coliforms, lead, phosphate, nitrate, manganese, iron, and chloride. The results are pending.

There is a noticeable difference in the appearance of ground water samples from locations GW1 and GW2 during the two monitoring periods.

Sample location	November 2020	January 2021
GW1	Olive green with dark particles	Pale yellow with dark particles
GW2	Cloudy white with white particles	Cloudy grey with white particles
GW3	Very pale yellow/green	Clear
GW4	Clear	clear

Table 4: Comparison of ground water samples taken in two monitoring periods.



Figure 4: Ground water samples taken on 14th January 2021.



Figure 5: Ground water samples taken on 23rd November 2020.

Noise levels

Noise levels were measured from 5 locations during daytime, from 4:00pm to 5:00pm. The noise levels are relatively low and similar to the values from the previous monitoring report.

Table below shows the measured noise levels on 14th January 2021.

Location	Noise level/ dBA
NQ1	67.3
NQ2	66.1
NQ3	53.3
NQ4	54.1
NQ5	55.0

Table 5: Noise levels

THILAFUSHI HARBOUR REHABILITATION PROJECT

Monitoring Report 03

April 2021

PREPARED BY:
MALDIVES TRANSPORT AND CONTRACTING COMPANY PVT LTD

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1. Introduction

This monitoring report is prepared as part of the Environmental Protection and Preservation Act, law 4/93 and as a requirement of the EIA regulation 2012 which mandates that a proper environment impact assessment is undertaken for development projects and a monitoring program be undertaken to assess the impact on the environment. The EIA for the project was prepared by Ahmed Jameel (EIA P07/2007) & Abdul Aleem (EIA P03/2019) in December 2019. The project involves harbour rehabilitation, waste processing, administrative building, workshop and civil works for C & D plant, recycling yard and ELV dismantling workshop at K. Thilafushi.



Figure 1

2. Purpose

The purpose of this monitoring report is to ensure that the environmental thresholds, as specified, in the regulations are not surpassed during the project. This will ascertain that the mitigation measures recommended in the EIA are effective and whether necessary actions need to be taken to further improve the mitigation measures.

3. Methods

The monitoring methods prescribed in the monitoring section of the EIA Report was followed during the collection of data for this report.

Noise level

Noise levels were measured at the 5 locations sampled in the EIA. Measurements were taken during daytime from 4:00pm to 5:00pm.

Marine Water Quality

Water quality parameters for the marine environment were measured in situ by using YSI multi-parameter water quality meter. The parameters that were measured are in table 1.

Parameter	Unit
Salinity	psu
Temperature	°C
pH	-
Turbidity	FNU
Total Suspended Solids	mg/L
Dissolved Oxygen	mg/L

Table 1: Parameters measures for marine water

Ground water quality

Ground water samples were taken in 800ml glass bottles from 4 locations to be tested at MWSC laboratory. However, given that due to delays they could not be tested at the laboratory. Hence, the insitu testing results carried out using the YSI multi parameter water quality meter have been presented in this report. Thus, some parameters have been omitted from the test results and the tested parameters are detailed in table 2.

Parameter	Unit
Conductivity	μS/cm
Total Suspended Solids	mg/L
pH	-
Turbidity	FNU
Nitrate	mg/L

Table 2: Parameters measured for ground water

Air quality

Air quality was measured at the 4 locations sampled in the EIA. Measurements were taken during daytime between 4:00pm to 6:00pm.

Aeroqual Series 500 air quality monitor was used.

Parameters monitored:

1. PM₁₀
2. PM_{2.5}
3. Ozone
4. Nitrogen dioxide

4. Monitoring locations

Water quality



Figure.2: Water sampling locations

Water samples for environmental monitoring were taken from the locations marked in figure 2. Marine water (SW) was sampled from 7 locations and ground water (GW) was sampled from 4 locations.

Noise level



Figure.3: Noise sampling locations

Noise levels were measured at the locations marked in figure 3.

Air quality



Figure 4: Air quality sampling locations

5. Analysis and Results

Marine water quality

The samples taken from the sites SW1 to SW6, which were surrounding Thilafushi, appeared clear with particles. However, water at SW7 was a pale green colour (locations marked in figure 2). The water was tested in situ for pH, temperature, turbidity, total suspended solids, salinity, and dissolved oxygen. The results did not vary much and pH, temperature, turbidity and TSS remained within the thresholds recommended by EPA.

Salinity and DO are in the usual ranges in the Maldives as well. Salinity measurements in the sea water in Maldives usually range between 33 - 45‰ (Stoddart, 1966, as cited in Jameel & Aleem, 2019). Dissolved oxygen in the sea water ranges between 4 – 8mg/L (Naeem & Sattar, 2007).

The values are similar to the recorded values from November 2020.

The table below outlines the results of the water tests.

Parameter	Optimum Range	SW1	SW2	SW3	SW4	SW5	SW6	SW7
Physical Appearance	-	Clear with Particles	Clear with Particles	Clear with Particles	Clear with Particles	Clear with Particles	Clear with Particles	Pale green with
pH	6.0 - 9.0 (ANZECC)	8.67	8.79	8.79	8.81	8.81	8.81	8.76
Temperature (°C)	18 - 32 (ANZECC)	29.39	29.24	29.54	29.90	29.33	29.32	30.78
Turbidity (NTU)	<3 (EPA)	0.09	0.15	0.07	0.20	0.07	1.06	2.12
Total Suspended Solids	<5 (EPA)	<5	<5	<5	<5	<5	<5	<5
Salinity (‰)	-	33.84	33.85	33.72	33.63	34.01	33.96	33.86
DO (mg/L)	-	6.02	5.93	5.98	6.20	6.02	6.01	6.04

Table 3: Results for samples SW1 - SW7

Ground water quality

Ground water samples were taken from locations GW1 to GW4, as seen in figure 2.

There is no noticeable difference in the appearance of ground water samples from the four locations. However, all samples had particles as seen in figure 5.

The samples taken from the sites GW1 to GW4, which were surrounding Thilafushi, appeared slightly cloudy with particles. The water was tested in situ for pH, turbidity, total suspended solids, conductivity, and nitrates. The results showed that the pH levels were within the acceptable levels by the EPA but the turbidity levels at the sites excepts for GW3 were above the recommended levels. Conductivity levels varied at the sites with GW2 levels are significantly lower compared to the other sites. Also, the nitrate levels were significantly above the recommended threshold in GW1 while the others were below the recommended level.

Parameter	Optimum Range	GW1	GW2	GW3	GW4
Physical Appearance	-	Slightly Cloudy with Particles	Slightly Cloudy with Particles	Slightly Cloudy with Particles	Slightly Cloudy with Particles
pH	6.0 - 9.0 (ANZECC, 2000)	7.42	7.33	7.78	7.79
Turbidity (NTU)	<3 (EPA)	3.45	6.56	2.32	5.98
Total Suspended Solids	<5 (EPA)	<5	<5	<5	<5
Conductivity	-	15670	1098	12548	6122
Nitrate	<5 (EPA)	29.00	3.90	1.78	0.84

Table 4: Results for samples SW1 - SW7

Sample location	November 2020	January 2021	April 2021
GW1	Olive green with dark particles	Pale yellow with dark particles	Slightly Cloudy with Particles
GW2	Cloudy white with white particles	Cloudy grey with white particles	Slightly Cloudy with Particles
GW3	Very pale yellow/green	Clear	Slightly Cloudy with Particles
GW4	Clear	clear	Slightly Cloudy with Particles

Table 5: Comparison of ground water samples taken in two monitoring periods.



Figure 4: Groundwater samples taken on 2nd May 2021 [GW1, GW2, GW3, GW4 - from left to right]



Figure 5: Ground water samples taken on 14th January 2021.



Figure 6: Ground water samples taken on 23rd November 2020.

Noise levels

Noise levels were measured from 5 locations during daytime, from 13:00 to 14:00. The noise levels are lower than the values from the previous monitoring report.

Table below shows the measured noise levels on 21st April 2021.

Location	Noise level/ dBA
NQ1	51.3
NQ2	52.2
NQ3	41.6
NQ4	41.1
NQ5	43.8

Table 6: Noise levels

Air quality

Table below shows the measured air quality from AQ1, AQ2, AQ3 and AQ4 on April 21, 2021.

Average time: 10min

Parameters	AQ1	AQ2	AQ3	AQ4
PM ₁₀ (ppm)	0.006	0.037	0.239	0.007
PM _{2.5} (ppm)	0.002	0.001	0.118	0.001
O ₃ (ppm)	0.00	0.00	0.00	0.00
NO ₂ (ppm)	0.028	0.035	0.011	0.011

Table 7: Air Quality Levels

THILAFUSHI HARBOUR REHABILITATION PROJECT

Air Quality Report

February 2021

PREPARED BY:
MALDIVES TRANSPORT AND CONTRACTING COMPANY PVT LTD

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1. Introduction 2

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1. Introduction

This monitoring report is prepared as part of the Environmental Protection and Preservation Act, law 4/93 and as a requirement of the EIA regulation 2012 which mandates that a proper environment impact assessment is undertaken for development projects and a monitoring program be undertaken to assess the impact on the environment. The EIA for the project was prepared by Ahmed Jameel (EIA P07/2007) & Abdul Aleem (EIA P03/2019) in December 2019. The project involves harbour rehabilitation, waste processing, administrative building, workshop and civil works for C & D plant, recycling yard and ELV dismantling workshop at K. Thilafushi.

2. Purpose

This is an addendum to Monitoring report 2, to include air quality data that was missing from the previous report.

3. Methods

Air quality

Air quality was measured at the 4 locations sampled in the EIA. Measurements were taken during daytime between 4:00pm to 6:00pm.

Aeroqual Series 500 air quality monitor was used.

Parameters monitored:

1. PM₁₀
2. PM_{2.5}
3. Sulphur dioxide
4. Nitrogen dioxide

4. Monitoring locations

Air quality



Figure 1: Air quality sampling locations

Air quality was measured at the locations marked in figure 2.

5. Results

Table below shows the measured air quality from AQ1, AQ2, AQ3 and AQ4 on February 23, 2021.

Average time: 10min

Parameters	AQ1	AQ2	AQ3	AQ4
PM ₁₀ (ppm)	0.109	0.037	0.129	0.039
PM _{2.5} (ppm)	0.027	0.026	0.028	0.024
SO ₂ (ppm)	0.16	0.25	0.16	0.63
NO ₂ (ppm)	0.076		0.086	0.094

SITE VISIT REPORT– Thilafushi, 05NOV2020



Project name/N°	Project Management, Design and Construction Supervision Consultants (Firm) for the Greater Male Environmental Improvement and Waste Management Project				
Date	05.11.2020	Time Frame	1430 Hrs – 1700 Hrs	Author	Fayaz Bunyameen

Participants	Abdulla Fayaz, WS Mohamed Bunyameen, WS Mohamed Umar, WS Hamdhullah Shakeeb, WS Hussain Aflaan, WS Yoosuf Ismail Firag, WS Abdulla Abdul Azeez, MTCC Krishan Santhanathanasan, MTCC
Copy to	All participants

Objective of the Site Visit

1. Confirm Progress Report against Invoice.
2. Safeguards and Environmental assessments.

Observations/Instructions

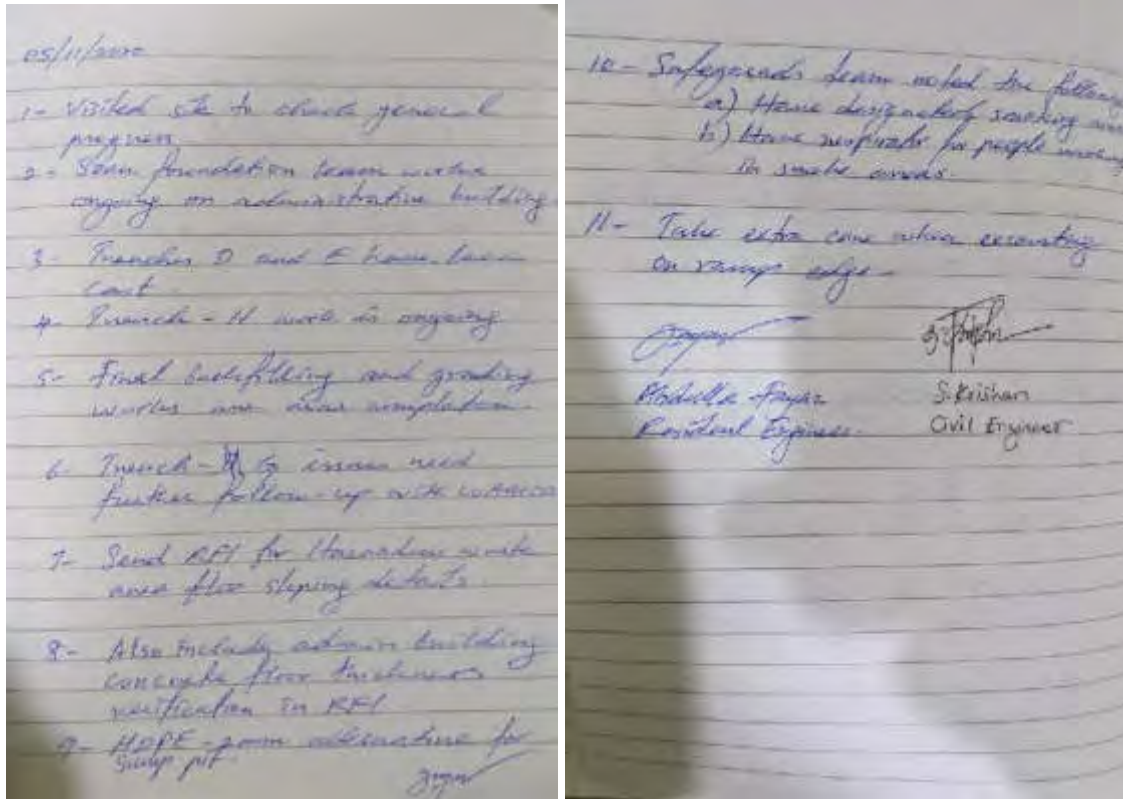
1. Checked general progress, it is good and tallies with the progress report submitted.
2. Inspected foundation beam works of ongoing administrative building.
3. Trenches D and E have been casted.
4. Trench H work is ongoing.
5. Final backfilling and grading works are near completion.
6. Trench G issues need further follow-up with WAMCO.
7. Send RFI for hazardous waste area floor sloping details.
8. Instructions to include admin building concrete floor thickness verification in RFI,
9. Send RFI for HDPE 2 mm alternative for slump pit.
10. Take extra care when excavating on ramp edge, make sure there is no erosion under the ramp slab.

Safeguards Team Recommendations

1. To have designated smoking area at the Camp.
2. To have respirators for staff working in any burning / smoke filled dump areas.

SITE VISIT REPORT- Thilafushi, 05NOV2020

Photo Documentation



Copy of site log book



Trench-D (gap between harbour is to run shore electric etc)



Trench-F



Trench-C



Trench-H (works on going)



Trench-B,C intersection (revising the last piece a bit)



Trench-G (ask WAMCO to divert the pipes)



Ramp edge (the slope is pretty good)



Ramp edge (careful of erosion under the ramp slab)



Admin Building foundation beam work



Filling and grading works (to reach +3.0 on top of slab)

SITE VISIT REPORT– Thilafushi, 05NOV2020

Arial Photos of site work in progress.



SITE VISIT REPORT– Thilafushi, 05NOV2020



SITE VISIT REPORT– Thilafushi, 08DEC2020



Project name/N°	Project Management, Design and Construction Supervision Consultants (Firm) for the Greater Male Environmental Improvement and Waste Management Project				
Date	08.12.2020	Time Frame	1000 Hrs – 1300 Hrs	Author	Fayaz Bunyameen

Participants	Chakir Kasdarli, KOCKS Consultant Ibrahim Zameel, PIU Mohamed Abdul Latheef, MoE Abdul Aleem, WS Abdulla Fayaz, WS Mohamed Bunyameen, WS Ibrahim Faiz, WS Mohamed Umar, WS Yoosuf Ismail Firag, WS Mohamed Khalid, MTCC Abdulla Abdul Azeez, MTCC Krishan Santhanathanasan, MTCC WAMCO staff
Copy to	All participants

Objective of the Site Visit

1. Confirm Progress Report against Invoice.
2. Safeguards and Environmental assessments.
3. Team Leader's inspection of the work progress and give technical advice.

Observations/Instructions

1. Checked general progress, it is good and tallies with the progress report submitted.
2. Inspected works at Administrative Building.
3. Inspected works at Workshop Building.
4. Inspected all trenches, connections and slopes with Team Leader.
5. Inspected grading works.
6. Inspected the Ramp for ships.
7. Discussed the ramps for workshop.
8. At Site Office, discussed pending matters of septic tank pipes, electric meter on boundary and vehicle rerouting away from work site with WAMCO.
9. General discussions on maintaining the pace to catch up with project schedule.
10. Inspected Camp Area.
11. Team Leader went on to inspect bailer area and getting ready for arrival of new Bailer and Siever.

Safeguards Team Recommendations

1. All safeguard and safety measures are satisfied.

Photo Documentation



On arrival temperature reading and hand sanitation

Workshop building



Discussion at site office



Inspection trench



Inspecting ship ramp

SITE VISIT REPORT– Thilafushi, 10JAN2021

Project name/N°	Project Management, Design and Construction Supervision Consultants (Firm) for the Greater Male Environmental Improvement and Waste Management Project				
Date	10-01-2021	Time Frame	1000 Hrs – 1300 Hrs	Author	Fayaz Bunyameen

Participants	Abdulla Fayaz, WS Mohamed Bunyameen, WS Juma Ahmed, WS Abdulla Abdul Azeez, MTCC Sampath Kumar Mani, MTCC Krishan Santhanathanasan, MTCC
Copy to	All participants

Objective of the Site Visit

1. Confirm Progress Report against Invoice.
2. Advise and instruct on technical engineering aspects of the project.
3. Safeguards and Environmental assessments.

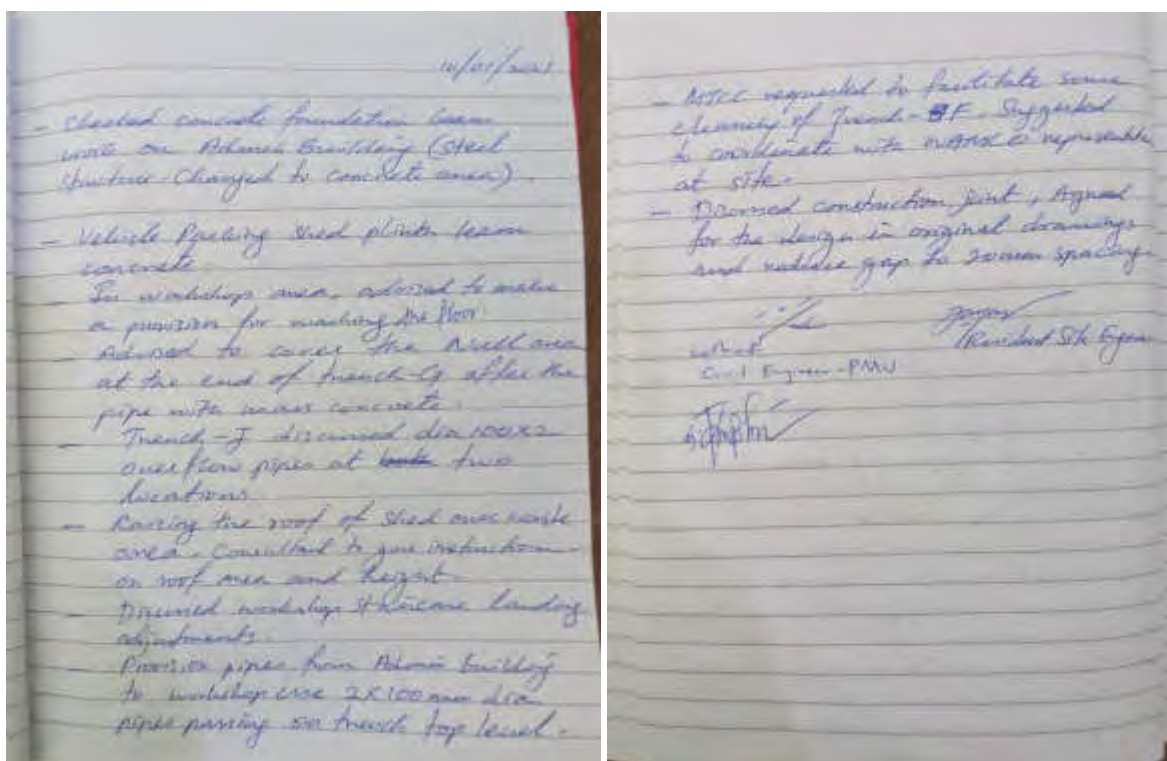
Observations/Instructions

1. Checked concrete foundation beam work on admin building (steel structure area).
2. Vehicle parking shed plinth beam concrete.
3. In workshop area, advised to make a pipe provision for washing the floor (floor drain in corner).
4. Advised to cover the null area at the end of the trench-G after the pipe with mass concrete.
5. Trench-J discussed diameter 100diax2nos overflow pipes at the two ends of J.
6. Discussed raising the height of “shed over waste area” to match “bailer building” roof as requested by Employer. Consultant to give instructions on the roof area and height.
7. Discussed workshop staircase landing adjustments. (Agreed)
8. Provision pipes from admin building to workshop use 2x100 mm diameter pipe passing on the trench top level. (for electric and water). MTCC will reflect these in shop drawing to be submitted for services.
9. MTCC requested to facilitate some cleaning of trench-F. Mud is sliding into Trench-F from the waste mound. Need to stop lorries crossing for a while. Suggested to coordinate with WAMCO representatives at site. Agreed.
10. Discussed construction joint. Agreed for design in original drawings and reduce gap to 20 mm spacing. (*update: on 19th Jan, MTCC is proposing the option with a beam at the bottom*)

Safeguards Team Recommendations

1. All safeguard and safety measures are satisfied.

Photo Documentation



Copy of site log book



Trench-D (oil/sediment trap will be joined here)



Trench-F (flooded with mud from the waste mound)

SITE VISIT REPORT– Thilafushi, 10JAN2021



Trench-C



Workshop

(agreeing on a deep zone Above which to cross electrical, water lines without disturbing flow)



Trench-B,C intersection



Trench-G (pipes diverted by WAMCO)



Admin Building foundation beam work



Project site compaction and grading



Junction box



Concrete carriageway jointing sample

SITE VISIT REPORT– Thilafushi, 17FEB21



Project name/N°	Project Management, Design and Construction Supervision Consultants (Firm) for the Greater Male Environmental Improvement and Waste Management Project				
Date	17-02-2021	Time Frame	1000 Hrs – 1200 Hrs	Author	Fayaz Bunyameen

Participants	Abdulla Fayaz, WS Mubthasim Mohamed Saleem, WS Mohamed Abdul Latheef, PIU Abdulla Abdul Azeez, MTCC Sampath Kumar Mani, MTCC Krishan Santhanathanasan, MTCC
Copy to	All participants

Objective of the Site Visit

1. Confirm Progress Report against Invoice.
2. Advise and instruct on technical / engineering aspects of the project.
3. Safeguards and Environmental assessments.

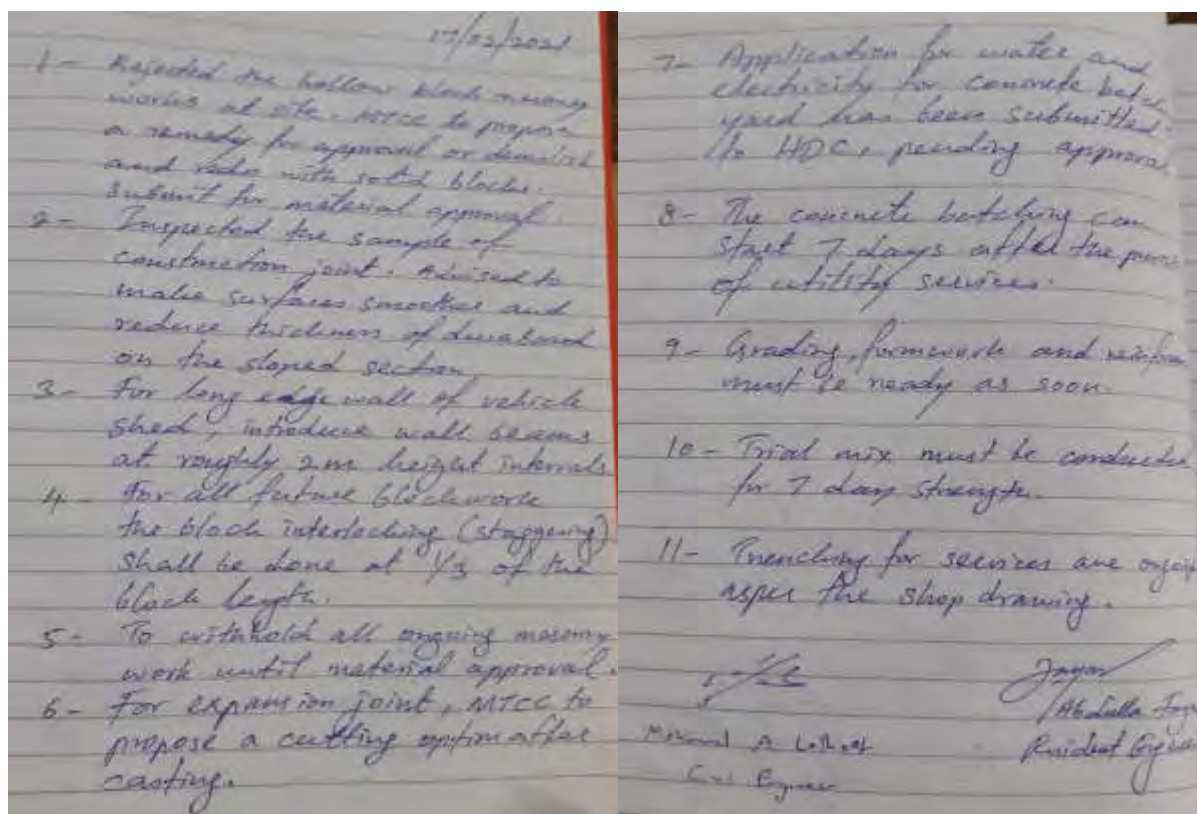
Observations/Instructions

1. Rejected the hollow block masonry works at site. MTCC to propose a remedy for approval or demolish and redo with solid blocks made of river sand. Submit for material approval.
2. Inspected the sample of construction joint. Advised to make surfaces smoother and reduce thickness of duraboard on the sloped section.
3. For long edge wall of vehicle shed, introduce wall beams at roughly 2 m height intervals.
4. For all future blockwork, the block interlocking (staggering) shall be done at 1/3 of the block length.
5. To withhold all ongoing masonry work until material approval for masonry block.
6. For expansion joint, MTCC said they will propose a cutting option after casting. (In many applications the expansion joint is done by means of a concrete saw which can cut a groove on the cured concrete)
7. Application for water and electricity for concrete batching yard has been submitted to HDC, pending approval.
8. The concrete batching can start 7 days after the provision of the above utility services.
9. Grading, formwork and reinforcement must be ready by the time the batching plant is up and running.
10. A trial mix must be conducted for 7 days strength.
11. Trenching for services are ongoing as per the shop drawing.

Safeguards Team Recommendations

1. All safeguard and safety measures are satisfied.

Photo Documentation



Copy of site log book



Guard Room (These unapproved blocks have been removed now)



Parking shed (These unapproved blocks have been removed now)



Workshop (These unapproved blocks have been removed now)



Admin Building



هوذا قد خرجت من بيتي و
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APPROVAL OF ENVIRONMENTAL IMPACT ASSESSMENT

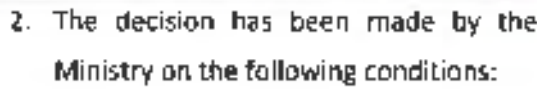
Number: 203-FIN/HR/1498/2014/95

میر تقی میر کی شہرہ آفاق شاعری کے بارے میں ایک نیا کتاب "میر تقی میر کی شاعری کا مطالعہ" شائع ہوئی ہے۔ یہ کتاب میر تقی میر کی شاعری کے مختلف پہلوؤں کو اجاگر کرتی ہے اور ان کی شاعری کے تاریخی و ادبی پس منظر کو پیش کرتی ہے۔

This Environmental Decision Statement is issued for the purpose of communicating the decision regarding the Environmental Impact Assessment for the proposed **Waste Transfer Facility Development Project at male', Kaafu Atoll**, which was submitted for evaluation on **29th May 2017** and submitted additional information on **13th July 2017** by **Ministry of Environment and Energy**. The consultants of the project are **Ahmed Jameel (EIA P07/2007) and Akeed Ahmed (EIA T04/17)**

1. This Environmental Decision Statement has been issued on behalf of the Environmental Protection Agency (hereinafter referred to as the Ministry) pursuant to the Environmental Impact Assessment Regulations 2012 (2012/R-27) to advise that the Ministry has decided that the proposed Development Proposal can proceed according to the Environmental Impact Assessment Report.

1. هر دو شرکت در سال ۱۳۹۸ و ۱۳۹۹ به ترتیب ۱۰۰ و ۱۵۰ میلیارد تومان به دولت و شهرداری تهران بابت حق امتیاز پرداخت کردند. این شرکت در سال ۱۳۹۸ و ۱۳۹۹ به ترتیب ۱۰۰ و ۱۵۰ میلیارد تومان به دولت و شهرداری تهران بابت حق امتیاز پرداخت کردند.

[illegible]

1. In the event the project activity has not commenced within one (1) year from the date of issue, or if the duration of this Environmental Decision Statement has not been extended, this Environmental Decision Statement shall be considered null and void. In order to extend the duration of this Environmental Decision Statement, the Proponent shall write to the Minister for an extension according to Clause 14 of the 2nd Amendment to the Environmental Impact Assessment Regulations 2012.

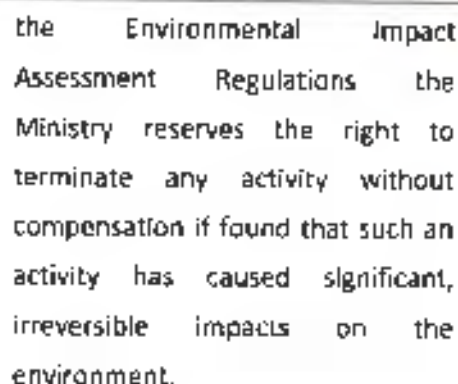
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- ii. In the event the project activities has been delayed for more than one (1) year due to unforeseen circumstances, the Ministry shall have the discretion to extend the duration of the Environmental Decision Statement, or to terminate it. In such circumstances the proponent shall write to the Minister for an extension clearly stating out the reasons for the

[illegible]



- [illegible]

[illegible]

- vii. All mitigation measures proposed in the EIA report for all the phases of the project shall be fully implemented.

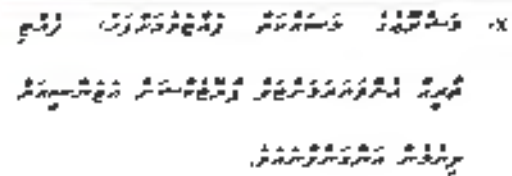
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- viii. The environmental monitoring program outlined in the Environmental Impact Assessment Report shall be undertaken and implemented and summary environmental monitoring reports shall be submitted to the Ministry.

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- ix. The date of expiry stated in this Environmental Decision Statement is the duration given to commence the project activities approved under this Environmental Decision Statement.

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APPROVAL OF ENVIRONMENTAL IMPACT ASSESSMENT

Number: 203-ECA/438/2020/20: ٢٠٢٠/٤٣٨-٢٠٣

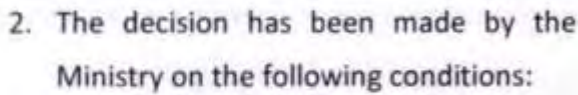
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*This Environmental Decision Statement is issued for the purpose of communicating the decision regarding the EIA for the Establishment of Waste Transfer Station in Villigili Island, Kaafu Atoll, which was submitted for evaluation on **20th January 2020** and submitted additional information on **05th March 2020** by Ministry of Environment. The EIA consultant of this project is Mr. Ahmed Jameel (EIA P07/2007).*

1. This Environmental Decision Statement has been issued on behalf of the Environmental Protection Agency (hereinafter referred to as the Ministry) pursuant to the Environmental Impact Assessment Regulations 2012 (2012/R-27) to advise that the Ministry has decided that the proposed Development Proposal can proceed according to the Environmental Impact Assessment Report.

- [illegible]





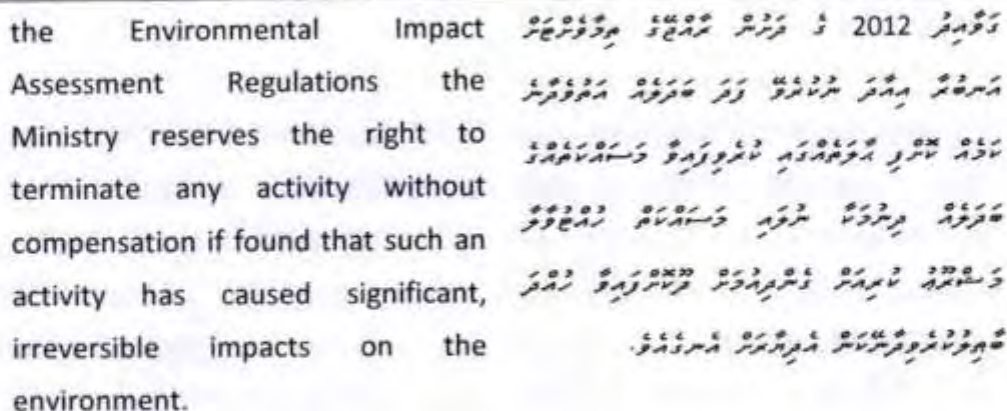
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- i. In the event the project activity has not commenced within one (1) year from the date of issue, or if the duration of this Environmental Decision Statement has not been extended, this Environmental Decision Statement shall be considered null and void. In order to extend the duration of this Environmental Decision Statement, the Proponent shall write to the Minister for an extension according to clause 14 of the Environmental Impact Assessment Regulation 2012.

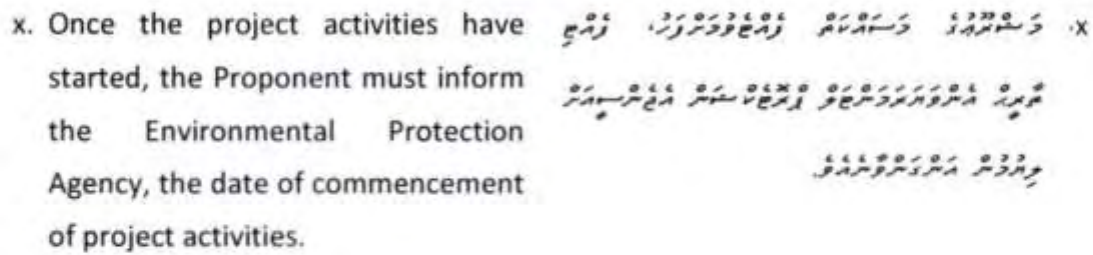
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- ii. In the event the project activities have been delayed for more than one (1) year due to unforeseen circumstances, the Ministry shall have the discretion to extend the duration of the Environmental Decision Statement, or to terminate it. In such circumstances the proponent shall write to the Minister for an extension clearly stating out the reasons for the

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قرنهای هجری: 08 و 09

دوره شانزدهم، شماره دوم؛ زمستان ۱۳۹۹

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APPROVAL OF ENVIRONMENTAL IMPACT ASSESSMENT- EXTENDED

05 2020 20 2020

(EIA P07/2007)

*This Environmental Decision Statement is issued for the purpose of communicating the decision regarding the **EIA for the Establishment of Waste Transfer Station in Villigili Island, Kaafu Atoll**, which was submitted for evaluation on **20th January 2020** and submitted additional information on **05th March 2020** by **Ministry of Environment**. The EIA consultant of this project is **Mr. Ahmed Jameel (EIA P07/2007)**.*

1. This Environmental Decision Statement has been issued on behalf of the Environmental Protection Agency (hereinafter referred to as the Ministry) pursuant to the Environmental Impact Assessment Regulations 2012 (2012/R-27) to advise that the Ministry has decided that the proposed Development Proposal can proceed according to the Environmental Impact Assessment Report.

1- هر چه در این کتاب آمده است، از نظر علمی و فقهی، مورد تأیید و تصدیق است. هر چه در این کتاب آمده است، از نظر علمی و فقهی، مورد تأیید و تصدیق است. هر چه در این کتاب آمده است، از نظر علمی و فقهی، مورد تأیید و تصدیق است.

Markus



2. The decision has been made by the Ministry on the following conditions:

2- در صورتیکه تصمیم بر این گرفته شود که پرونده پروانه محیط زیست را رد کند، این تصمیم باید بر اساس شرایط زیر اتخاذ شود:

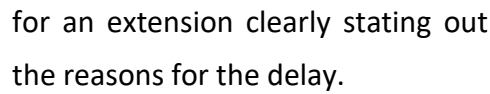
i. In the event the project activity has not commenced within one (1) year from the date of issue, or if the duration of this Environmental Decision Statement has not been extended, this Environmental Decision Statement shall be considered null and void. In order to extend the duration of this Environmental Decision Statement, the Proponent shall write to the Minister for an extension according to clause 14 of the Environmental Impact Assessment Regulation 2012.

i- اگر در صورتیکه فعالیت پروژه در مدت یک (1) سال از تاریخ صدور پروانه محیط زیست آغاز نشده باشد، یا اگر مدت اعتبار این بیانیه تصمیمات محیط زیست تمدید نشده باشد، این بیانیه تصمیمات محیط زیست منقضی خواهد شد. در صورتیکه به منظور تمدید مدت اعتبار این بیانیه تصمیمات محیط زیست، متقاضی باید به وزیر محیط زیست درخواست تمدید را بر اساس ماده 14 از آیین نامه ارزیابی اثرات محیط زیست 2012 ارسال کند.

ii. In the event the project activities have been delayed for more than one (1) year due to unforeseen circumstances, the Ministry shall have the discretion to extend the duration of the Environmental Decision Statement, or to terminate it. In such circumstances the proponent shall write to the Minister

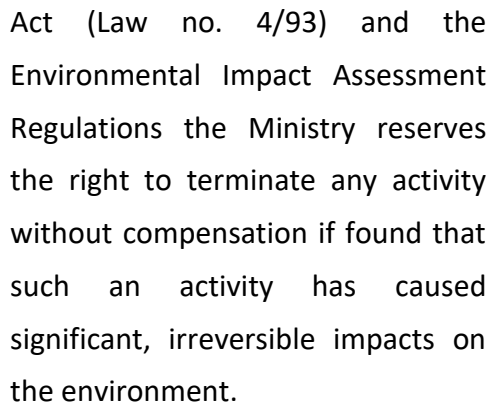
ii- 1- در صورتیکه فعالیت پروژه بیش از یک (1) سال به دلیل شرایط غیرمنتظره تأخیر کرده باشد، وزارت محیط زیست اختیار دارد که مدت اعتبار این بیانیه تصمیمات محیط زیست را تمدید کند، یا آن را منقضی کند. در این شرایط، متقاضی باید به وزیر محیط زیست درخواست تمدید یا منقضی شدن این بیانیه تصمیمات محیط زیست را ارسال کند.

معاونت امور محیط زیست و منابع طبیعی



- ط. ۱۰۰۰ ی. ۱۰۰۰ ی. ۱۰۰۰ ی. ۱۰۰۰ ی. ۱۰۰۰ ی. ۱۰۰۰ ی. ۱۰۰۰ ی. ۱۰۰۰ ی. ۱۰۰۰ ی. ۱۰۰۰ ی.

Page 3 of 5



vii. All mitigation measures proposed in the EIA report for all the phases of the project shall be fully implemented.

viii. The environmental monitoring program outlined in the Environmental Impact Assessment Report shall be undertaken and implemented and summary environmental monitoring reports shall be submitted to the Ministry.

ix. The date of expiry stated in this Environmental Decision Statement is the duration given to commence the project activities approved under this Environmental Decision Statement.

[illegible]

M. J. G. G.



- x. Once the project activities have started, the Proponent must inform the Environmental Protection Agency, the date of commencement of project activities.

x- ڏسڻ ۾ ايندڙ ڪم جي شروعات ٿيڻ کان پوءِ، پراڻو ڪم ڪندڙ کي
محکمہ ماحوليات جي آگاهي ڏيڻي پوندي ته ڪم جي شروعات
ڪيئن ٿيڻ لڳي.

Date of Issue: 22nd February 2021

تاريخ ۾ 22 فبروري 2021

Date of expiry: 22nd February 2022

تاريخ ۾ 22 فبروري 2022

Name: Ibrahim Naeem

نوم: ابراهيم نعيم

Designation: Director General

دستخط: جنرل مديون

Signature:





SOUTH ASIA REGIONAL DEPARTMENT
SAUW Environmental Monitoring Report Log Sheet

Project title:	Greater Male Environmental Improvement and Waste Management Project		
Grant Number:		Project Number:	51077-002
Overall Project Description and Objectives	The objective of the project is to establish a sustainable solid waste management (SWM) system in the Greater Malé capital region and its inhabited outer islands by; (i) Establishing a modern waste collection, transfer, and disposal system, (ii) Improving community-based outer island waste management systems, (iii) Building institutional capacity for sustainable services delivery, and (iv) Raising public awareness in reduce, reuse, recycle (3R) behaviors.		
Approved Categorization		Category A	Category C
	x	Category B	FI
Loan Effectivity Date:		Frequency of Reporting	Semi-Annual
Project Officer	Luca Di Mario	Project Analyst	
Reporting Year	2020	Coverage Period	November 2020- April 2021
Date of PMU Submission to ADB	27 May 2021 06 Oct 2021 (revised version)	Date of ADB's feedback to PMU	8 July 2021 12 Oct 2021

Item	Findings in the SEMR/QEMR	Comments	Action/s Required	Response by PMU ¹	Final Comments
A. Project Safeguards Team (check loan agreement and PAM requirements)					
PMU ² PIU ³	The PMU has assigned Mr. Mohamed Asif as the Social and Environmental Safeguards Specialist.	None.	None.		None.
Consultants	From the PMDSC Team, Mr. Abdul Aleem serves as the Environmental Safeguards Expert.	None.	None.		None.
Contractor	Designated Environmental Officer- Mamdhooch Ali	None.	None.		None.

¹ PMU to provide detailed response. This log sheet will be attached to the SEMR/QEMR and disclosed on ADB website.

² PMU – project management unit

³ PIU – project implementation unit

Item	Findings in the SEMR/QEMR	Comments	Action/s Required	Response by PMU ¹	Final Comments
B. Overall Project and Subproject Description <i>(summarize number and type of packages)</i> ⁴					
Number of Packages with civil works <i>(check if consistent with latest procurement plan)</i>	Four (4) Packages with Civil Works: CW/01 DBI/01 DBI/02 CW/03	Complied.	None.		Complied.
Number of DB/DBO packages and status	1 DBO: DBI/01 Transfer stations in Male and Villimale-Bid Evaluation is ongoing.	None.	None.		None.
Number of civil works packages and status	Four (4) Packages with Civil Works: CW/01- Contract signed on 21 Nov 2019. At 25% physical progress. DBI/02 and CW/03- Construction and Demolition (C&D) waste processing plant bid announced bidding on 21 May 2020. Concept design finalized for IWMCs. Draft bidding documents are under review.	None.	None.		None.
IEEs cleared for awarded packages?	Found in Section IV of the SEMR. CW/01 (with ongoing works)- The draft IEE	None.	None.		None.

⁴ DB/DBO – design-build or design, build, and operate or where contractor will finalize the detailed engineering design; civil works contract – sufficient details of the package is known and used as basis for bid/contract's Technical Specification

Item	Findings in the SEMR/QEMR	Comments	Action/s Required	Response by PMU ¹	Final Comments
	disclosed on the website is considered as the final IEE as there were no significant changes to the detailed design.				
Safeguard documents disclosed on project website?	The links provided in Section IV are for disclosed IEEs in ADB website.	Links to project website disclosures were provided in previous SEMR.	None.		Links to project website disclosures were provided in previous SEMR.
SEMR information on implementation phase (bidding, on-going, construction, completed, under operation, others)	Implementation phase of each package were found in the SEMR.	Complied.	None.		Complied.
SEMR information on construction activities progress	Construction progress was indicated in the SEMR (i.e. CW/01 is at 25% physical progress.)	Complied.	None.		Complied.
C. Status of compliance with statutory clearances (check IEE for the complete list, summarize the findings for each package – obtained/under application and if obtained, specify validity period)					
Environmental Clearance (EC)	Approved decision statements (DS) were received for all subprojects. Male Transfer station's DS has expired and application for renewal is being processed. Based on attachment, DS for Waste Transfer Station in Villingli Island has also expired in March 2021.	See actions required.	Provide the status of renewal of Villingli Transfer Station's DS. Male Transfer station's DS expired in 2018. Continue providing updates on the status of renewal of the DS in the next SEMR. Ensure that no construction works will commence without valid DSs.	Villingli Transfer Station DS renewed and approved by EPA. Will attach the new DS as an attachment to the SEMR. No construction works will be allowed to commence without a valid DS.	Confirmed: Renewal of DS is attached
Forest Clearance	No other permits are reported as required.	None.	None.		None.
No Objection Certificate/Letter					

Item	Findings in the SEMR/QEMR	Comments	Action/s Required	Response by PMU ¹	Final Comments
Site location clearance					
Permit/Consent to Construct (or equivalent)					
Permit/Consent to Operate (or equivalent)					
Road-cutting permit					
Utilities shifting permit					
Tree-cutting permit					
Others (specify)					
D. Status of Compliance with grant agreements/covenants (verify items in SEMR with project loan agreement)					
Schedule 4 - 2 Environment The Recipient, through MOFT and MEE, shall 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 Recipient relating to environment, health and safety; (b) the Environmental Safeguards; (c) the EARF, and (d) all measures and requirements set forth in the IEEs, the EMPs, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.	Being complied.	None.	None.		None.
Schedule 4 – 4 Human and Financial Resources to Implement Safeguards Requirements The Recipient shall make available or cause MOFT to make available necessary budgetary and human resources to fully implement the EMPs	Being complied.	None	None		None
Schedule 4 – 5 Safeguards-Related Provisions in Bidding Documents and Works Contracts	Status of compliance is provided.	None	None		None

Item	Findings in the SEMR/QEMR	Comments	Action/s Required	Response by PMU ¹	Final Comments
A- comply with the measures relevant to the contractor set forth in the IEE and the EMP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report; B- make available a budget for all such environmental measures; and C- provide the Recipient with a written notice of any unanticipated environmental, resettlement or indigenous peoples risks or impacts that arise during construction, implementation or operation of the Project that were not considered in the IEE and the EMP.	All bidding documents will have the IEE included and compliance will be ensured by the safeguard specialist				
Schedule 4 – 6 Safeguards Monitoring and Reporting A- submit semiannual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission; B- - If any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEEs and the EMPs, promptly inform ADB of the occurrence of such risks or	Status of compliance is provided. Discussion on COVID-19 exposure incident and actions taken were provided in the SEMR.	None.	None.		None.

Item	Findings in the SEMR/QEMR	Comments	Action/s Required	Response by PMU ¹	Final Comments
impacts, with detailed description of the event and proposed corrective action plan; and C- Report any actual or potential breach of compliance with the measures and requirements set forth in the EMPs promptly after becoming aware of the breach.					
Schedule 4 – 7 Prohibited List of Investments The Recipient, through MOFT and MEE, shall ensure that no proceeds of the Grant are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the SPS.	Being complied	None	None.		None
Schedule 4 – 8 Labor Standards, Health and Safety F- disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including HIV/AIDS, to the employees of contractors engaged under the Project and to members of the local communities surrounding the Project area, particularly women.	Included in bidding documents and contracts	None	None		None
Schedule 4-9 The Recipient, through MOFT and MEE, shall strictly monitor compliance with the requirements set forth in paragraph 8 above and provide-ADB with regular reports.	Report says “Will be complied.”	None	None		None
E. Contractors Compliance with Environmental Safeguards Requirements					
Appointment of Environment, Health and Safety (HSE) and/or nodal person	The nodal person for CW/01's environmental	Complied.	None.		Complied.

Item	Findings in the SEMR/QEMR	Comments	Action/s Required	Response by PMU ¹	Final Comments
	safeguards is Mamdhoo Ali.				
Submission of site-specific EMPs	According to the SEMR, CEMP was prepared by contractor and approved. CEMP and OHS Plan are attached in the appendices. Contractor's environmental monitoring report (air quality, water quality, groundwater quality and noise) is also attached. Overall compliance with CEMP was described as satisfactory.	No information on Contractor's CEMP/OHS Plan implementation report submission.	Please confirm if the Contractor submits inspection checklists/contractor reports on CEMP/OHS Plan implementation. Indicate the frequency of submission to PMU/PMDSC and discuss a summary of information in the report (such as Contractor's toolbox meetings/safety inductions conducted, site environment, health and safety inspections, and incidents statistics, etc.). Attach sample copies of contractor's CEMP/OHS Plan implementation reports during the reporting period and filled-out inspection checklists by the Contractor. Provide explanation if this was not done. PMU/PMDSC must ensure that Contractor submits the required reports in the next reporting periods.	As per the OHS plan the contractor would submit a site safety inspection form, however, due to the outbreak of COVID19 there was a shortage of man power on site to conduct the inspection. However, environmental monitoring reports were prepared and submitted. CEMP/OHS plan implementation inspection checklists will be submitted on the next reporting period. CEMP implementation is monitored through the contractor's environmental monitoring reports which are submitted as attachments to this SEMR. PMU will ensure in the next reporting period that all reports are submitted on time by the contractor.	Noted. In the next SEMR, please ensure to provide information on the CEMP, including report on its implementation.
Submission of SEMP implementation report (<i>specify in comments frequency – daily, weekly, monthly or quarterly basis</i>)					

Item	Findings in the SEMR/QEMR	Comments	Action/s Required	Response by PMU ¹	Final Comments
Site verification by PMU, PIU, or consultants (<i>verification report should be attached to the SEMR</i>)	The SEMR provides no information about site verifications by the PMU/PMDSC.	We noted from the report about the COVID-19 incidents from March- April 2021.	Confirm if the PMDSC conducted site inspections during the reporting period, at least from November 2020 to February 2021. Attach site inspection reports by the PMDSC. If not conducted, please provide explanation. Ensure that PMDSC conducts site inspections on a regular basis (monthly per attached CEMP) and provide signed site verification/inspection checklists/reports in the next SEMR.	PMDSC conducts site inspections regularly. November to February Site inspection reports attached.	Noted.
SEMR compliance matrix on mitigation measures implementation (matrixes are based on approved SEMP)	SEMR compliance matrix based on the approved EMP and remarks on implementation at the site are presented.	The basis of EMP implementation at the site is unclear. There are no checklists/contractor report nor PMDSC reports discussed/ found in the SEMR. Per attached CEMP, the Contractor is to monitor on site EHS on a daily basis, and the PMDSC is to conduct monthly site visits.	Discuss the basis of EMP implementation assessment. Contractor should begin conducting daily site inspections and PMDSC to conduct monthly site inspections per attached CEMP.	PMDSC site inspection reports attached.	Noted. However, the inspection report prepared by PMDSC is purely set of photos and results of testing. In the next SEMRs, please provide discussions on every site visit, including analysis of the results of sampling activities.
Other information					
F. Environmental Monitoring					

Item	Findings in the SEMR/QEMR	Comments	Action/s Required	Response by PMU ¹	Final Comments
Rationale					
Parameters to be monitored are commensurate to the impacts, mitigation measures, and project/subproject/package	Standards used were discussed (EU directives, WHO guideline values, ANZECC, 2000, EPA) but the values are not presented.	The values of standards used need to be provided to determine the project's performance. ADB SPS 2009 requires the adoption of the more stringent standard, otherwise, justification has to be provided.	Present the standard values used for air quality, water quality and noise (based on EU directives, WHO guideline values, ANZECC, EPA) in table format together with the monitoring results for all stations and months during the reporting period (including Contractor's monitoring results). Discuss if the standards used meet the ADB SPS requirements (refer to the the approved IEE for the applicable standards on air and noise). Provide a justification if less stringent standards are used. Discuss if the results comply with the appropriate standards. Please provide the reason for the gaps and discuss how the PMU plans to comply with the gaps in environmental monitoring in terms of	The standard values used for AQ, WQ and noise presented on the revised document. Discussions provided separately for AQ, WQ and Noise reg the compliance of the results to the standards. The PMU is trying to understand the difficulties the contractor is facing regarding the monitoring frequency. And regarding the monitoring parameters, PMU is exploring other options for laboratory water testing.	Noted. In the next reporting periods, please ensure to use proper units of measure for the results of environmental sampling activities. For example, the unit used for results of ambient air quality sampling as indicated in the main body of the report is mg/l, while in the attached inspection report says it is in ppm. This kind of inconsistency should be corrected in the next SEMRs. To reiterate, in the next reporting period, please conduct monitoring based on the monitoring plan and monitoring parameters per approved IEE. If there are deviations or inability to monitor required parameters, please provide corresponding justification.
Sampling locations identified and appropriate					
Sampling frequency identified and appropriate					
Sampling collection and analysis are in accordance with internationally-accepted practices					
Standards and performance indicators are compliant with ADB SPS requirements ⁵ (provide justification if less stringent standards are used)	The monitoring parameters and locations were listed in the report/presented in the Contractor's report (attached). Some parameters were (air quality, water quality) not tested. The results provided in the report represent one-day sampling or monitoring. Attached Contractor's report provided sampling results for November 2020, January 2021 and April 2021.	It seems like there are still gaps in environmental monitoring in terms of frequency (monthly) and parameters monitored (air quality, water quality) and it was noted that some water quality parameters cannot be tested in the Maldives during the reporting period. Environmental monitoring (i.e. air quality, water quality and noise) are not done on a monthly basis per monitoring program in the approved IEE.			

⁵ ADB SPS (Appendix 1 para 33) requires projects to apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognized standards such as the World Bank Group's Environmental, Health and Safety Guidelines (<https://www.ifc.org/ehsguidelines>). These standards contain performance levels and measures that are normally acceptable and applicable to projects. When host country regulations differ from these levels and measures, the borrower/client will achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, the borrower/client will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented ADB SPS.

Item	Findings in the SEMR/QEMR	Comments	Action/s Required	Response by PMU ¹	Final Comments
			(i) frequency and (ii) parameters per approved IEE/EMP. In the next reporting period, provide monthly environmental monitoring results for all parameters per approved IEE.		
G. Environmental monitoring results (narrative based on presented results)					
Air quality results	According to the report, the results for air quality are within the maximum concentration limit per EU Air Quality Directive. For Water Quality, parameters- pH, Temperature, turbidity and total suspended solids are well within the optimum range per standards used. For Noise- day time noise is high.	Standards/performance indicator values (except for water quality) were not indicated.	Indicate the standard values in comparison with the results. Please refer to the approved IEE for the applicable standards on air and noise.	Discussions provided separately for AQ, WQ and Noise reg the compliance of the results to the standards.	Noted. Please refer to final comments above.
Water quality results					
Noise quality results					
Others	n/a				
H. Consultations and/or FGDs during the reporting period					
Number	No consultations were conducted as it was discouraged by the Health Protection Agency.	Meaningful consultation throughout project implementation is a requirement of the ADB SPS 2009.	In the next reporting periods, conduct meaningful consultation activities following COVID-19 health and safety measures and health regulations, and		In the next reporting periods, conduct meaningful consultation activities following COVID-19 health and safety measures and health regulations, and
Reason/s for consultations/FGDs					
Number of participants					
Number of female participants					

Item	Findings in the SEMR/QEMR	Comments	Action/s Required	Response by PMU ¹	Final Comments
			report on the same in the SEMRs.		report on the same in the SEMRs.
I. Trainings, Workshops, Seminars during the reporting period					
Number	No trainings/workshops were conducted following Health Protection Agency.	Please see actions required.	In the next reporting periods, conduct trainings on environmental safeguards while observing COVID-19 health and safety measures and following health regulations, and report on the same in the SEMRs.		In the next reporting periods, conduct trainings on environmental safeguards while observing COVID-19 health and safety measures and following health regulations, and report on the same in the SEMRs.
Topics					
Number of participants					
Number of female participants					
J. Grievance Redress Mechanism					
GRM per PAM or IEE/EARF established	GRM is active and is ready to receive complaints. For Thilafushi, there is no island council, however, it is part of the City council (first tier). The PMU serves as the second tier. GRM notification is done through the Ministry of environment, Climate Change and Technology website.	None.	Provide discussion on any capacity development (trainings, workshops, briefings) conducted for GRM members in the past.	No trainings / workshops conducted for GRM members yet. However at the PMDCSC survey trips, the council offices on all islands were given briefings about the GRM. We will be arranging further capacity development activities in the future.	Noted. Please ensure to undertake the capacity development activities and include report/discussions in succeeding SEMRs.
GRM notified via publication or notice boards					
GRM members identified					
GRM members have capacity to address project-related complaints (detailed information on capacity development of GRM members such as trainings, workshops, briefings, etc should be attached in the SEMR)					
Number of meetings conducted (attach minutes of the meeting)					
K. Complaints Received (detailed information on nature of complaints, summary and status of resolution)					
Number of complaints	No complaints received during the period.	N/A	None.		None.
Nature (provide summary of issues/concerns)					
Status of resolution					
L. Summary of Issues and Corrective Actions					
Major issues/concerns (specify)	No environmental safeguard issues were reported in the SEMR except the	See action required.	Discuss necessary improvements in the existing COVID-19 SOPs and/or its		Discuss necessary improvements in the existing COVID-19 SOPs and/or its
Corrective Action to be implemented, timeline, responsible					

Item	Findings in the SEMR/QEMR	Comments	Action/s Required	Response by PMU ¹	Final Comments
person/s, and budget are clearly specified	case of COVID-19 exposure.		implementation, if any, and whether the improvements have already been initiated/implemented. Provide a discussion in this report or in the next monitoring report.		implementation, if any, and whether the improvements have already been initiated/implemented. Provide a discussion in this report or in the next monitoring report.
M. Status of Corrective Action Plan from Previous Reporting Period (list all and provide status)					
Ensure to conduct monitoring as per approved IEEs, as the minimum.	Gaps in environmental monitoring are still observed.	Gaps in environmental monitoring are still observed.	Please provide reason for the gaps, and discuss how the PMU plans to comply with the gaps in environmental monitoring in terms of (i) frequency and (ii) parameters per approved IEE/EMP.	The PMU is trying to understand the difficulties the contractor is facing regarding the monitoring frequency. And regarding the monitoring parameters, PMU is exploring other options for laboratory water testing.	Noted. To reiterate, in the next reporting period, please conduct monitoring based on the monitoring plan and monitoring parameters per approved IEE. If there are deviations or inability to monitor required parameters, please provide corresponding justification.
N. Appendixes					
Photos	Included in the appendix		In the next SEMR, continue to provide photos of all site inspections/visits conducted during the reporting period. Please indicate geographic locations (coordinates) and provide captions that will describe the photos.		In the next SEMR, continue to provide photos of all site inspections/visits conducted during the reporting period. Please indicate geographic locations (coordinates) and provide captions that will describe the photos.
Summary of consultations	Not found in the report.		In the next SEMRs, continue to attach photos, attendance		In the next SEMRs, continue to attach photos, attendance

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			sheets and summary of consultations.		sheets and summary of consultations.
Copies of environmental clearances and permits	Expired DSs for transfer stations are attached.		Please provide copies of DS renewal applications for the two transfer stations.	Renewed DS for Vilimale TS attached. Male TS DS was expired. This EIA needs to be updated and resubmitted to EPA. As this is a Design Build project, the EIA will be updated once the design is finalized. We will ensure that the physical works/construction starts only after we receive the DS for the EIA.	Noted. Renewal of DS is attached.
Site EMPs	CEMP and OHS Plan are attached.		None.		
Checklists	Not found in the report		Please attach the Site verification/inspection checklists/ reports by the PMDSC.	Attached	Noted. However, the inspection report prepared by PMDSC is purely set of photos and results of testing. In the next SEMRs, please provide discussions on every site visit, including analysis of the results of sampling activities.
O. Other Issues					
Revised SEMR Nov 2020-April 2021 (submitted 16 Jul 2021)	Results of air quality monitoring were presented and the WHO guideline values for ambient air quality in the IFC/WB General EHS	WHO ambient air quality guideline values are for 24-hour/1-hr sampling, to be sampled off-site or at the fence line.	In the next reporting period, please ensure that ambient air sampling methods and location of sampling are acceptable for		In the next reporting period, please ensure that ambient air sampling methods and location of sampling are acceptable for

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	Guidelines were used as reference. Air quality measurements were taken using handheld air quality monitoring devices (Aeroqual Series 500). NO ₂ , PM ₁₀ , PM _{2.5} and CO ₂ levels were measured at the Harbor rehabilitation site. 15-minute averages were taken for each parameter.		comparison with standards/guideline values being used.		comparison with standards/guideline values being used.
	Groundwater quality monitoring is conducted, and results are presented.	Standards used are the indicative guideline values for treated sanitary wastewater discharges from the IFC-WBG EHS Guidelines (Table 1.3.1).	In the next monitoring report, please discuss the purpose of groundwater quality monitoring being conducted in the next SEMR.		In the next monitoring report, please discuss the purpose of groundwater quality monitoring being conducted in the next SEMR.
	Marine water samples were tested for various parameters and results were compared with ANZECC and EPA standards. Some parameters required per approved EMP were not tested.	See actions required.	In the next monitoring report, please explain/discuss the context of using ANZECC, 2000 and EPA standards and the optimum ranges presented. In the next reporting period, please test for required parameters per approved EMP.		In the next monitoring report, please explain/discuss the context of using ANZECC, 2000 and EPA standards and the optimum ranges presented. In the next reporting period, please test for required parameters per approved EMP.
	Noise monitoring was conducted at the project site. Off-site noise monitoring results were presented in the attached Contractor's	The occupational health and safety noise limits for various working sites (Table 2.3.1 of the IFC-WBG General EHS Guidelines) must be used for comparison with project site noise.	Use the appropriate guideline values/limits for noise at the project site (i.e. for Heavy industry, Table 2.3.1 of the IFC-WBG General EHS Guidelines).		Use the appropriate guideline values/limits for noise at the project site (i.e. for Heavy industry, Table 2.3.1 of the IFC-WBG General EHS Guidelines).

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	Environmental Monitoring Report.	Noise results in the contractor's report were not compared against a particular standard/reference.	In the next reporting period, please include the results of the contractor's ambient noise monitoring in the main report and compare the results with the noise level guideline values per IFC-WBG, Table 1.71. (Reference: Guidelines for Community Noise, World Health Organization (WHO), 1999.). Indicate whether the receptor at the sampling station is residential, commercial, etc.		In the next reporting period, please include the results of the contractor's ambient noise monitoring in the main report and compare the results with the noise level guideline values per IFC-WBG, Table 1.71. (Reference: Guidelines for Community Noise, World Health Organization (WHO), 1999.). Indicate whether the receptor at the sampling station is residential, commercial, etc.
	Contractor's ambient air quality monitoring results were presented in parts per million (ppm).	Contractor's monitoring results are too high when converted from ppm to ug/m3 (i.e. equivalent to $\times 10^6$ ug/m3).	Please check if the unit used is correct.		In the next reporting periods, please ensure to use proper units of measure for the results of environmental sampling activities. For example, the unit used for results of ambient air quality sampling as indicated in the main body of the report is mg/l, while in the attached inspection report says it is in ppm. This kind of inconsistency should be corrected in the next SEMRs.
Reference/s 1. 5 th SEMR for GMEIWMIP Nov 2020-April 2021, submitted 27 May 2021 2. 5 th SEMR for GMEIWMIP Nov 2020-April 2021, revision submitted 06 Oct 2021					

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3. Initial Environmental Examination March 2018 MLD: Greater Malé Environmental Improvement and Waste Management Project – Improvement of Waste Handling and Processing Facilities for Thilafushi Island (Construction and Demolition Waste Plant, End-of-Life Vehicle Dismantling Workshop, Waste Vessel Harbor Improvements, and Administration Building) 4. Project Administration Manual, Project Number 51077-002, Republic of Maldives: Greater Malé Environmental Improvement and Waste Management Project 5. Grant Agreement, 16 August 2018					