MAX HOTELS GROUP
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Initial Environmental Examination (IEE) Report

For

Novotel Yangon Max Hotel Project

Version 00

eguard ENVIRONMENTAL SERVICES

June, 2025

Initial Environmental Examination (IEE) Report for Novotel Yangon Max Hotel Project

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Novotel Yangon Max Hotel Project

Proposed by

Max (Myanmar) Hotel Co., Ltd.

Prepared by

E Guard Environmental Services

June 2025

Version 00

17.6.2025	00	1st Issue	Daw Thet Mhue Khin	Dr. Myint Oo	U Aye Thiha	U Bo Chan Tun
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Summary: IEE Report This document presents the Initial Environmental Examination (IEE) Report for Novotel Yangon Max Hotel	**Approved by:** Aye Thiha (Managing Director)

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This report has been prepared within the terms of references (TOR) adopted for Initial Environmental Examination Report for Novotel Yangon Max Hotel Project and those of the contract with the client according to the prevailing active Laws, Rules, Regulations, and Procedures within the framework of Myanmar Environmental Impact Assessment Procedure 2015. We do not assume any responsibility or liability in regard with any matters beyond the scope of the TOR and the contract.

Data analysis, impact assessment, devising mitigation measures and report formulation were carried out based on the information/ plan/ processes provided by the project proponent, available secondary data and information, and onsite observation and measurement of E Guard's environmental study team in line with the relevant national and international guidelines and standards. While we do take effort to ensure that the information contained in this report is reliable and accurate, we disclaim no responsibility for errors and omissions which might occur despites of our reasonable skill and care.

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The personal, organizational, and commercial data and information contained in this report were included solely upon the demand and requirements of concerned authority, and we have no intention of breaching the privacy or disclosing the trade secrets whatsoever.

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Commitment to follow and compliance with Environmental Conservation Law, Rules, Environmental Impact Assessment Procedure, National Environmental Quality (Emission) Guidelines, Relevant Environmental Standards and Mitigation Measures stated in the Environmental Management Plan (EMP) of the IEE Report

With regard to the above matter,

We, E Guard Environmental Services have prepared the Initial Environmental Examination (IEE) Report for Novotel Yangon Max Hotel which is located at No. 459, Ward 8, Kamayut Township, Pyay Road, Yangon Region, Myanmar. We are confident that the report has been prepared in compliance with Environmental Conservation Law (2012), Environmental Conservation Rules (2014), Environmental Impact Assessment Procedure (2015), National Environmental Quality (Emission) Guidelines (2015) and relevant environmental standards through successful implementation of mitigation measures and environmental monitoring plans stated in the Environmental Management Plan (EMP) of IEE report.

Aye Thiha
Managing Director
E Guard Environmental Services

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Third Party

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Commitment to follow Environmental Conservation Law, Rules and Regulations, Environmental Standards, and Mitigation Measures Stated in the Initial Environmental Examination (IEE) Report

Regarding the above matter,

We, Max (Myanmar) Hotel Co., Ltd., strongly commit that this IEE for our project has been carried out on works associated with Novotel Yangon Max Hotel project which is located on No. (459), Pyay Road, Ward (8), Kamayut Township, Yangon. Our company strongly commits that all our operations must be performed in an environmentally friendly manner by following the Environmental Conservation Law (2012), Environmental Conservation Rules (2014), and other relevant environmental standards through the successful implementation of mitigation measures, Environment Management Plans (EMPs), and Environmental Monitoring Plan (EMoP) stated in this operational Initial Environmental Examination (IEE) Report.

MAX MYANMAR HOTEL COMPANY LIMITED

Bo Chan Tun
Managing Director
Max Myanmar Hotel Co., Ltd.

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IEE	Initial Environmental Examination
EIA	Environmental Impact Assessment
MONREC	Ministry of Natural Resources and Environmental Conservation
MIC	Myanmar Investment Commission
ECD	Environmental Conservation Department
RC	Reinforce Concrete
CCTV	Closed Circuit TV
YESC	Yangon Electricity Supply Corporation
YCDC	Yangon City Development Committee
PPE	Personal Protective Equipment
HVAC	Heating, Ventilation and Air Conditioning
LED	Light-Emitting Diode
OHS	Occupational Health and Safety
HACCP	Hazard Analysis and Critical Control Point
FCC	Fire Command Center
DICA	Directorate of Investment and Company Administration
MIFER	Ministry of Investment and Foreign Economic Relations
EMP	Environmental Management Plan
SIA	Social Impact Assessment
UNCED	United Nations Conference on Environment and Development
NSDS	National Sustainable Development Strategy
UNFCCC	United Nations Framework Convention on Climate Change
NEQEG	National Environmental Quality (Emission) Guidelines
WHO	World Health Organization
MSTRD	Myanmar Science Technology and Research Department
WEPA	Water Environment Partnership
ADB	Asia Development Bank
IGES	Institute of Global Environmental Strategies
JICA	Japan International Cooperation Agency
NSWQS	National Surface Water Quality Standards
IFC	International Finance Corporation
EHS	Environmental, Health and Safety
PS	Performance Standard
UN-DESA	United Nations Department of Economic and Social Affairs
TCU	True Color Unit
NAQQS	National Ambient Air Quality Standards
ACGIH	American Conference of Governmental Industrial Hygienists
MOE, Japan	Ministry of the Environment, Japan
ESIA	Environmental and Social Impact Assessment
WB	World Bank
ESRS	Environmental and Social Review Summary
CSR	Cooperate Social Responsibility
GRM	Grievance Redress Mechanism
AOI	Area of Influence
EPAS	Environmental Perimeter Air Station
CO	Carbon Monoxide
CO_2	Carbon Dioxide
NO_2	Nitrogen Dioxide
SO_2	Sulphur Dioxide

PM	Particulate Matter
Temp	Temperature
EC	Electrical Conductivity
DO	Dissolved Oxygen
NTU	Nephelometric Turbidity Units
BOD	Biological Oxygen Demand
COD	Chemical Oxygen Demand
TSS	Total Suspended Solids
PCU	Passenger Car Unit
PCE	Passenger Car Equivalents
GAD	General Administration Department
MM	Modified Mercalli
USGS	United States Geological Survey
PGA	Peak Ground Acceleration
PGV	Peak Ground Velocity
ERT	Emergency Response Team
ODS	ozone-depleting substances
CFCs	Chloro Fluoro Carbons
HCFCs	Hydro Chloro Fluoro Carbons

အကျဉ်းချုပ်အစီရင်ခံစာ

ဤအစီရင်ခံစာသည် ဟိုတယ်နှင့်ဝန်ဆောင်မှုလုပ်ငန်းများ အကောင်အထည်ဖော်ဆောင်ရွက်လျက်ရှိသော Max (Myanmar) Hotel Co., Ltd. မှ အဆိုပြုတင်ပြထားသည့် Novotel Yangon Max ဟိုတယ်ဝန်ဆောင်မှုလုပ်ငန်းစီမံကိန်းအတွက် ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းအစီရင်ခံစာဖြစ်ပါသည်။ စီမံကိန်းတစ်ခုအကောင်အထည်ဖော် ဆောင်ရွက်ရာတွင် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဥပဒေ (၂၀၁၂) အရ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅) တွင် ဖော်ပြထားသော စီမံကိန်းအမျိုးအစားနှင့် အရွယ်အစားသတ်မှတ်ချက်များအပေါ်မူတည်၍ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် (EMP)၊ သို့မဟုတ် ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း (IEE)၊ သို့မဟုတ် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း (EIA) အစီရင်ခံစာကို သယံဇာတနှင့်ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနသို့ တင်သွင်းရန်လိုအပ်ပါသည်။ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၏ (၂၀၂၄) ခုနှစ်၊ ဧပြီလ၊ (၂၄) ရက်နေ့ ရက်စွဲပါစာအမှတ် (၁၃၆၆/၂၀၂၄) ဖြင့် အကြောင်းကြားလာသော သဘောထားမှတ်ချက်အရ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းအစီရင်ခံစာကို ရေးဆွဲခဲ့ပါသည်။ ဟိုတယ်သည် တည်ဆောက်ရေးလုပ်ငန်းကို (၂၀၁၅) ခုနှစ်တွင် ဆောက်လုပ်ပြီးစီးခဲ့ပြီး၊ (၂၀၁၅) ခုနှစ်၊ ဧပြီလမှစ၍ ဟိုတယ်ဝန်ဆောင်မှုလုပ်ငန်းများကို လည်ပတ်လျက်ရှိသည်။ (၂၀၂၄) ခုနှစ်၊ အောက်တိုဘာလ၊ (၂၃) ရက်နေ့တွင် ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း အစီရင်ခံစာဆောင်ရွက်မည့် တတိယအဖွဲ့အစည်း အတည်ပြု အကြောင်းကြားစာပြန်ကြားလာပါသည်။ ထို့ကြောင့် အီးဂတ်ပတ်ဝန်းကျင်ဝန်ဆောင်မှုမှ ဤကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းအစီရင်ခံအား ပြင်ဆင်ခဲ့သည်။ အီးဂတ်ပတ်ဝန်းကျင်ဆိုင်ရာဝန်ဆောင်မှု လေ့လာဆန်းစစ်ရေးအဖွဲ့သည် စီမံကိန်းဧရိယာအတွင်းရှိ ပဏာမပတ်ဝန်းကျင်အခြေအနေများဖြစ်သော ရုပ်ပိုင်းဆိုင်ရာနှင့် လူမှုစီးပွားဆိုင်ရာကိစ္စရပ်များကို ကွင်းဆင်းတိုင်းတာခဲ့ပြီး၊ ဆင့်ပွားအချက်အလက်များကို လေ့လာဆန်းစစ်မှုများပြုလုပ်ကာ လုပ်ငန်းလည်ပတ်ကာလနှင့် ပိတ်သိမ်းကာလတို့တွင် ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများကို ဆန်းစစ်၍ အစီရင်ခံစာကို ရေးသားပြုစုထားသည်။ စီမံကိန်းဧရိယာသည် သစ်တောမြေသို့မဟုတ် ကန့်သတ်နယ်မြေပေါ်တွင် တည်ဆောက်ထားခြင်း မဟုတ်သောကြောင့် ဇီဝမျိုးစုံမျိုးကွဲများအား ထည့်သွင်းလေ့လာထားခြင်းမရှိပါ။ ထို့အပြင် ဟိုတယ်လုပ်ငန်းလည်ပတ်ကာလဖြစ်၍ တည်ဆောက်ရေးကာလကိုလည်း ထည့်သွင်းစဉ်းစားထားခြင်း မရှိပါ။

Novotel Yangon Max Hotel သည် ရန်ကုန်မြို့၏ ကြယ် (၅) ပွင့်ဟိုတယ်တစ်ခုဖြစ်သည်။ ရင်းနှီးမြှုပ်နှံမှုပမာဏမှာ ခန့်မှန်းခြေ ကျပ်သန်း ၅၆,၉၀၀ (အမေရိကန်ဒေါ်လာ ၂၃ သန်း) ဖြစ်ပါသည်။ အဆိုပါလုပ်ငန်းသည် အမှတ် (၄၅၉)၊ (၈) ရပ်ကွက်၊ ကမာရွတ်မြို့နယ်၊ ပြည်လမ်း၊ ရန်ကုန်မြို့တွင် တည်ရှိပြီး စီမံကိန်းဧရိယာ (၃.၂၉၅) ဧကပေါ်တွင် အခန်းပေါင်း (၃၆၆) ခန်းဖြင့် ဟိုတယ်ဝန်ဆောင်မှု လုပ်ငန်းဆောင်ရွက်လျက်ရှိပါသည်။ ဟိုတယ်တွင် အခန်းအမျိုးအစား (၈) မျိုးနှင့် အထူးအခန်းများ၊ အစည်းအဝေးခန်းများပါဝင်သည်။ ရေသန့်စင်ခြင်းစနစ်၊ ရေဆိုးသန့်စင်ခြင်းစနစ်၊ လေအေးပေးစက်စနစ်များ၊ စွမ်းအင်နှင့်ရေသုံးစွဲမှုအတွက် ရေရှည်တည်တံ့သော စီမံခန့်ခွဲမှုများ၊ စွန့်ပစ်ပစ္စည်းများ ထွက်ရှိခြင်းအတွက် အစီအစဉ်များ၊ လုပ်ငန်းခွင်ကျန်းမာရေး နှင့်

ဘေးအန္တရာယ်ကင်းရှင်းရေးအစီအစဉ်နှင့် အရေးပေါ်တုံ့ပြန်ရေးအစီအစဉ်များကို အကောင်အထည်ဖော် ဆောင်ရွက်လျက်ရှိပါသည်။

ဟိုတယ်လုပ်ငန်းအတွက် လျှပ်စစ်ဓာတ်အားအသုံးပြုခြင်းကို စနစ်တကျ ဖြန့်ဝေအသုံးပြုလျက်ရှိပါသည်။ လုပ်ငန်းဆောင်ရွက်မှုများအတွက် (၂,၀၀၀) ကေဗွီအေရှိသော ထရန်စဖော်မာနှစ်လုံးဖြင့် ရန်ကုန်လျှပ်စစ်ဓာတ်အားပေးရေးကော်ပိုရေးရှင်းမှ လျှပ်စစ်ဓာတ်အားရယူသုံးစွဲလျက်ရှိပြီး၊ လျှပ်စစ်မီးပြတ်တောက်မှု ဖြစ်ပွားပါက (၁,၆၆၀) ကေဗွီအေရှိသော ဒီဇယ်ဂျင်နရေတာသုံးလုံးအား အရန်ဓာတ်အားပေးအနေဖြင့် အသုံးပြုသွားမည်ဖြစ်သည်။ ဟိုတယ်၏ နေ့စဉ်လုပ်ငန်းစဉ်များ ဆောင်ရွက်ရန်အတွက် အချင်းဝက် (၈) လက်မ၊ အနက်ပေ (၃၆၀) ရှိသော ရေတွင်းသုံးတွင်းမှ ရေကို ရယူသိုလှောင်သုံးစွဲသွားမည်ဖြစ်သည်။

အဆိုပါဟိုတယ်တွင် စုစုပေါင်းပြည်တွင်းဝန်ထမ်း (၄၃၇) ဦးနှင့် ပြည်ပနိုင်ငံခြားသား (၃) ဦးကို ခန့်အပ်ထားပြီး၊ ဟိုတယ်လုပ်ငန်းဆောင်ရွက်မှုများအတွက် ဝန်ဆောင်မှုကဏ္ဍများစွာဖြင့် အမျိုးအစားများ ခွဲခြားထားပါသည်။ ဟိုတယ်လုပ်ငန်းဆိုင်ရာ ကျွမ်းကျင်ဝန်ထမ်းများကို အလုပ်ခွင်သင်တန်းများ စီမံဆောင်ရွက်ပေးသည့်အပြင် အဆင့်မြင့်သင်တန်းအစီအစဉ်များအတွက် နိုင်ငံခြားသို့ စေလွှတ်စေပြီး အဆိုပါသင်တန်းများအတွက် လိုအပ်သော ကုန်ကျစရိတ်များကိုလည်း ဘက်ဂျက်လျာထား စီမံထားရှိသည်။

ဟိုတယ်လုပ်ငန်းဆောင်ရွက်မှုများမှ အန္တရာယ်ရှိသောနှင့် အန္တရာယ်မရှိသော စွန့်ပစ်ပစ္စည်းဟူ၍ စွန့်ပစ်အစိုင်အခဲနှင့်အရည်များ ထွက်ရှိသည်။ ဟိုတယ်တွင် စွန့်ပစ်ပစ္စည်းများကို စနစ်တကျခွဲခြားရန်နှင့် စွန့်ပစ်ရန် အမှိုက်စီမံခန့်ခွဲမှုစနစ်ရှိသည်။ ဟိုတယ်မှထွက်ရှိသော အမှိုက်များကို ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီဖြင့် ချိတ်ဆက်၍ နေ့စဉ်စွန့်ပစ်မှု ဆောင်ရွက်သည်။ အန္တရာယ်ရှိသော အမှိုက်များကို လုံခြုံသောနေရာတွင် ရှင်းလင်းစွာ တံဆိပ်များကပ်၍ သိမ်းဆည်းထားသည်။ ဟိုတယ်ပြုပြင်ထိန်းသိမ်းရေးနှင့် အိမ်သုတ်ဆေးများ၊ သန့်ရှင်းရေးသုံးပစ္စည်းများကို သတ်မှတ်နေရာများတွင် သိမ်းဆည်းထားသည်။ ဟိုတယ်လုပ်ငန်း၏ ဘေစင်၊ မီးဖိုချောင်၊ ရေချိုးခန်းများမှ ရေဆိုးများထွက်ရှိပြီး၊ ၎င်းရေဆိုးများအား ရေဆိုးသန့်စင်ခြင်းစနစ်ဖြင့် သန့်စင်ပြီးမှသာ ရေမြောင်းတွင်းသို့ စွန့်ပစ်သည်။

စီမံကိန်းအဆိုပြုသူသည် Max (Myanmar) Hotel Co., Ltd. ဖြစ်ပြီး Novotel Yangon Max Hotel အမည်ဖြင့် ဟိုတယ်လုပ်ငန်းဆောင်ရွက်ရန်အတွက် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်၏ ခွင့်ပြုချက်ရရှိထားသော ကုမ္ပဏီ ဖြစ်ပါသည်။ စီမံကိန်းအဆိုပြုသူ၏ အချက်အလက်များကို အောက်တွင် အသေးစိတ်ဖော်ပြထားပါသည်။

ကုမ္ပဏီအမည်	Max (Myanmar) Hotel Company Limited
စီမံကိန်းအဆိုပြုသူ	ဦးဘိုချန်ထွန်း
ရုံးလိပ်စာ	အမှတ် ၄၅၉၊ Novotel Yangon Max Hotel၊ ဒုတိယထပ်၊ ပြည်လမ်း၊ (၈) ရပ်ကွက်၊ ကမာရွတ်မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။
ကုမ္ပဏီမှတ်ပုံတင်အမှတ်	၁၄၁၄၃၃၄၂

MIC ပါမစ်အမှတ်	၉၃၉/၂၀၁၃
လုပ်ငန်းအမျိုးအစား	Private Company Limited by shares
ရင်းနှီးမြှုပ်နှံမှုပမာဏ	အမေရိကန်ဒေါ်လာ ၂၃ သန်း
စီမံကိန်းကာလ	(၁၅) နှစ်

စီမံကိန်းအဆိုပြုသူနှင့် ဆက်သွယ်ရန်တာဝန်ရှိပုဂ္ဂိုလ်မှာ -

ဦးတိုးတက်ထွန်း (လက်ထောက်အထွေထွေမန်နေဂျာ)

Max (Myanmar) Hotel Company Limited

Novotel Yangon Max Hotel

ဆက်သွယ်ရန်ဖုန်းနံပါတ် - (၉၅၉) ၄၄၅၅၄၄၃၄

အီးမေးလ်လိပ်စာ - toetethtun@maxhotelsgroup.com

ဤကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းအစီရင်ခံစာပြင်ဆင်မှုကို အီးဂတ်ပတ်ဝန်းကျင်ဆိုင်ရာ ဝန်ဆောင်မှုမှ Max (Myanmar) Hotel Co., Ltd. ကိုယ်စားဆောင်ရွက်ခဲ့ပါသည်။ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း အစီရင်ခံစာ ပြင်ဆင်မှုတွင်ပါဝင်သည့် အဖွဲ့ဝင်များသည် ပညာရပ်ဆိုင်ရာကျွမ်းကျင်နှံ့စပ်မှုရှိခြင်း၊ ပတ်ဝန်းကျင်ထိခိုက်မှု အကဲဖြတ်ခြင်းဆိုင်ရာ အတွေ့အကြုံများစွာရှိခြင်း၊ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်နှင့် စောင့်ကြည့် လေ့လာခြင်းနှင့် အစီအစဉ်ရေးဆွဲခြင်းများကို ဆောင်ရွက်ရန် လုံလောက်သော ကျွမ်းကျင်ပညာရှင်များ ပါဝင်သည်။

ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းအစီရင်ခံစာ ရေးဆွဲရာ၌ မြန်မာနိုင်ငံတွင်သတ်မှတ်ထားသော မူဝါဒများ၊ ဥပဒေများနှင့် လမ်းညွှန်ချက်များကို လိုက်နာဆောင်ရွက်ရန်မှာ အရေးကြီးပါသည်။ စီမံကိန်း အကောင်အထည် ဖော်ဆောင်ရွက်သူအနေဖြင့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း (၂၀၁၅) နှင့် အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (၂၀၁၅) တို့နှင့်အညီ လိုက်နာဆောင်ရွက်ရန်လည်း အရေးကြီးပါသည်။

အစီရင်ခံစာတွင် ဟိုတယ်၏ လုပ်ငန်းလည်ပတ်မှုမှ တိုက်ရိုက် သို့မဟုတ် သွယ်ဝိုက်၍ဖြစ်စေ ပတ်ဝန်းကျင်သို့ ထိခိုက်နိုင်သည့် သက်ရောက်မှုအရ လေ့လာမှုဧရိယာအား သတ်မှတ်ထားပြီး၊ လေထုအရည်အသွေး၊ မြေဆီလွှာ ညစ်ညမ်းမှုနှင့် ရေအရည်အသွေး၊ ဆူညံသံနှင့်တုန်ခါမှု၊ အမှိုက်စီမံခန့်ခွဲမှုနှင့် ဒေသတွင်းလူမှုစီးပွား အခြေအနေ များကို ရယူရန်အတွက် ဟိုတယ်မှ (၀.၅) ကီလိုမီတာ အချင်းဝက်အတွင်း သတ်မှတ်ထားသည်။ ပတ်ဝန်းကျင်တွင် အဓိကအားဖြင့် စီးပွားရေးလုပ်ငန်း၊ ကျောင်း၊ တက္ကသိုလ်နှင့် လူနေရပ်ကွက်များ အစရှိသည်တို့ပါဝင်သည်။

လေထုအရည်အသွေး၊ ဆူညံသံနှင့်တုန်ခါမှုအဆင့်၊ အနှံ့နှင့် ရေအရည်အသွေးတိုင်းတာမှုများကို (၂၀၂၄) ခုနှစ်၊ အောက်တိုဘာလ၊ (၂) ရက်နေ့ နှင့် (၃) ရက်နေ့များတွင် ဆောင်ရွက်ခဲ့သည်။ အမှုန်အမွှား (PM_{10}, $PM_{2.5}$) နှင့် ဓာတ်ငွေ့ (SO_2၊ NO_2၊ CO, CO_2) အမျိုးအစားနှစ်ခုကို တိုင်းတာခြင်းဖြင့် ပတ်ဝန်းကျင်လေထုအရည်အသွေးကို

အကဲဖြတ်ခဲ့သည်။ တိုင်းတာမှုရလဒ်များသည် သတ်မှတ်စံချိန်စံညွှန်းများအတွင်း ရှိသည်ကိုတွေ့ရှိရသည်။ ဆူညံသံတိုင်းတာမှုကို (၂၄) နာရီ တိုင်းတာခဲ့ပြီး ရလဒ်များသည် သတ်မှတ်ချက်များထက် အနည်းငယ် ကျော်လွန်နေသည်ကို တွေ့ရသည်။ တုန်ခါမှုကိုလည်း (၂၄) နာရီ ဆက်တိုက်တိုင်းတာခဲ့ပြီး ရလဒ်များသည် သတ်မှတ်ချက်အတွင်း ရှိပါသည်။ အနံ့တိုင်းတာမှုရလဒ်သည်လည်း သတ်မှတ်ထားသော လမ်းညွှန်ချက်များနှင့် အညီရှိသည်ကို တွေ့ရှိရသည်။ မြေအောက်ရေအရည်အသွေးနမူနာကို မြေပြင်တိုင်းတာမှုနှင့် ဓာတ်ခွဲခန်းတွင် စမ်းသပ်မှုများ ဆောင်ရွက်ခဲ့ပြီး၊ စွန့်ထုတ်ရေအရည်အသွေးနမူနာကိုလည်း ဓာတ်ခွဲခန်းသို့ပေးပို့ကာ အရည်အသွေးတိုင်းတာခဲ့သည်။ စွန့်ထုတ်ရေ၏ Total Suspended Solids (TSS) နှင့် oil and grease သည် လမ်းညွှန်ချက်စံချိန်စံညွှန်းထက် အနည်းငယ်ကျော်လွန်နေပါသည်။ မြေအောက်ရေအရည်အသွေးသည် လမ်းညွှန်ချက်စံချိန်စံညွှန်းများအတွင်းရှိပါသည်။ ကမာရွတ်မြို့နယ်သည် စီးပွားရေးအရ အရေးပါသော မြို့နယ်တစ်ခုဖြစ်ပြီး၊ လမ်းပန်း ဆက်သွယ်ရေးကောင်းမွန်သောနေရာတွင် တည်ရှိပါသည်။ ပြည်လမ်းသည် ယာဉ်အသွားအလာများပြားသော်လည်း၊ ဟိုတယ်သို့ အဝင်/အထွက်ကားများကြောင့် ယာဉ်ကြောသွားလာမှုတွင် ပိတ်ဆို့မှုမရှိကြောင်း တွေ့ရှိရသည်။

ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းတွင် ဟိုတယ်၏ ပတ်ဝန်းကျင်သက်ရောက်မှုများအား အကဲဖြတ်ရန် Leopold Matrix နည်းလမ်းကို အသုံးပြုခဲ့သည်။ သက်ရောက်မှုတစ်ခုစီအား လေ့လာဆန်းစစ်ရာတွင် စီမံကိန်းအဆင့် တစ်ခုချင်းစီအရ ဖြစ်ပေါ်လာနိုင်သည့် သက်ရောက်မှုအတိုင်းအတာ၊ အချိန်ကာလနှင့် အကြိမ်အရေအတွက်များ အပေါ်မူတည်၍ လေ့လာဆန်းစစ်မှုများ ပြုလုပ်ပါသည်။ ဖြစ်ပေါ်လာနိုင်သော ပတ်ဝန်းကျင်ဆိုင်ရာ သက်ရောက်မှုအားလုံးအား လေ့လာဆန်းစစ်အကဲဖြတ်ခြင်းများပြုလုပ်၍ သိသာထင်ရှားသည့် သက်ရောက်မှုများအား အဆင့်သတ်မှတ်ချက်များဖြင့် ဖော်ပြထားပါသည်။

လေ့လာဆန်းစစ်ချက်များအရ ဟိုတယ်၏ လုပ်ငန်းဆောင်ရွက်မှုအများစုသည် ပတ်ဝန်းကျင်အပေါ် သက်ရောက်နိုင်မှု နည်းပါးပြီး၊ အချို့သောဆောင်ရွက်မှု လုပ်ငန်းစဉ်များတွင် အလယ်အလတ်အကျိုး သက်ရောက်နိုင်မှု ရှိသည်ကို တွေ့ရှိရသည်။ ဟိုတယ်သည် အလုပ်အကိုင်နှင့် စီးပွားရေးလုပ်ငန်းများကို ပံ့ပိုးပေးခြင်းဖြင့် ဒေသတွင်းစီးပွားရေးကို အပြုသဘောဆောင်သော အထောက်အကူဖြစ်စေပါသည်။ လုပ်ငန်းလည်ပတ်ကာလအတွင်း လုပ်ငန်းဆောင်ရွက်မှုအများစုသည် ရေအရည်အသွေး၊ အရင်းအမြစ်သုံးစွဲမှု၊ စွန့်ပစ်ပစ္စည်းထွက်ရှိမှု၊ လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေးနှင့် မီးဘေးအန္တရာယ်များကဲ့သို့သော သက်ရောက်မှုများသည် အလယ်အလတ်သက်ရောက်မှုများရှိသည်။ သို့ရာတွင် လုပ်ငန်းပိတ်သိမ်းကာလတွင် သက်ရောက်မှုနည်းပါးသည်ကို တွေ့ရှိရသည်။ အဆိုပါသက်ရောက်မှုများကို လျှော့ချရန် သက်ရောက်မှုစကေး၊ အမျိုးအစားများအလိုက် လျော့ပါသက်သာစေရေး အစီအမံများကိုလည်းဖော်ပြထားပါသည်။

စီမံကိန်းဆိုင်ရာအချက်အလက်များကို ထုတ်ဖော်ခြင်းသည် IEE အစီရင်ခံစာပြင်ဆင်မှုအတွက် အရေးကြီးပြီး အပြီးသတ်ဆောင်ရွက်မှုတွင် ပါဝင်ပတ်သက်သူအားလုံး၏ ထင်မြင်ယူဆချက်များကို ထည့်သွင်းစဉ်းစားရန် အရေးကြီးပါသည်။ အများပြည်သူနှင့်တိုင်ပင်ဆွေးနွေးခြင်း၏ ရည်ရွယ်ချက်မှာ IEE အစီရင်ခံစာကို ပြင်ဆင်ချိန်အတွင်း ပရောဂျက်နှင့်ပတ်သက်သည့် အချက်အလက်များကို ထုတ်ဖော်ရန်ဖြစ်သည်။ အဆိုပြုစီမံကိန်း

အတွက် အများပြည်သူနှင့်တွေ့ဆုံဆွေးနွေးပွဲအခမ်းအနားကို (၂၀၂၅) ခုနှစ် မေလ (၂၁) ရက်နေ့တွင် Novotel Yangon Max Hotel ရှိ Bagan Ballroom ၌ ကျင်းပခဲ့ပါသည်။ ၎င်းအခမ်းအနား၏ ဓာတ်ပုံမှတ်တမ်းများ၊ တက်ရောက်သူစာရင်းများ၊ မေးမြန်း ဆွေးနွေးသည့် အကြောင်းအရာများနှင့် အကြံပြုချက်များကို အစီရင်ခံစာတွင် အသေးစိတ် ဖော်ပြထားပါသည်။

ဟိုတယ်လုပ်ငန်း၏ လုပ်ငန်းလည်ပတ်ကာလနှင့် ပိတ်သိမ်းကာလတို့တွင် ဖြစ်နိုင်ခြေရှိသော ပတ်ဝန်းကျင်ဆိုင်ရာ ထိခိုက်မှုများဖြစ်သည့် လေထုအရည်အသွေး၊ ဆူညံသံနှင့်တုန်ခါမှု၊ မြေအောက်ရေနှင့် စွန့်ထုတ်ရေဆိုးအရည်အသွေးရလဒ်များ၊ ကွင်းဆင်းလေ့လာခြင်းနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာ အချက်အလက်များကို ထည့်သွင်းစဉ်းစားကာ ပတ်ဝန်းကျင်ဆိုင်ရာစီမံခန့်ခွဲမှုအစီအစဉ်ကို ပြင်ဆင်ခဲ့ပါသည်။ ထို့အပြင် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်သည် စီမံကိန်းအား သဘာဝပတ်ဝန်းကျင်နှင့် ရေရှည်တည်တံ့ခိုင်မြဲအောင် အကောင်အထည်ဖော်ကြောင်း သေချာစေရေးအတွက် စီမံကိန်းအလိုက် ဖွံ့ဖြိုးတိုးတက်ရေးကို စီစဉ်ပေးခြင်းဖြစ်သည်။ ထို့အပြင် ဆိုးရွားသော သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာ ထိခိုက်မှုများကို လျှော့ချရန် သင့်လျော်သောလျော့ပါးရေး အစီအမံများကို လုပ်ဆောင်ခြင်းဖြင့် စီမံကိန်းအကောင်အထည်ဖော်မှုကို ဆောင်ရွက်ကြောင်း သေချာစေပါသည်။ ဤစီမံကိန်းအတွက် အဆိုပြုထားသည့် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်တွင် (၁) လည်ပတ်ကာလနှင့် ပိတ်သိမ်းကာလအဆင့်များအတွက် ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်၊ (၂) တိကျသောစံလမ်းညွှန်ချက်များ ပါဝင်သည့် ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုရေးအစီအစဉ်၊ (၃) အမှိုက်စွန့်ပစ်ခြင်း စီမံခန့်ခွဲမှုအစီအစဉ်၊ (၄) လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေးအစီအစဉ်၊ (၅) ယာဉ်လမ်းကြောင်းစီမံခန့်ခွဲမှုအစီအစဉ်၊ (၆) လူမှုတာဝန်ခံမှုအစီအစဉ်နှင့် (၇) မကျေလည်မှုများဖြေရှင်းမည့်ယန္တရားအစီအစဉ်တို့ ပါဝင်ပါသည်။ သဘာဝပတ်ဝန်းကျင်ထိခိုက်မှု လျော့ပါးသက်သာစေရေးအစီအစဉ်တွင် လုပ်ငန်းလည်ပတ်ကာလ၊ ပိတ်သိမ်းကာလတို့နှင့် ဆက်စပ်နေသော သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာပြဿနာများအတွက် အကြံပြုထားသော လျော့ပါးသက်သာရေးအစီအမံများ ပါဝင်ပါသည်။ ထို့ကြောင့်လေ့လာမှုတွင် ဖော်ပြထားသည့် သင့်လျော်သော လျော့ပါသက်သာရေး အစီအမံများဖြင့် ပတ်ဝန်းကျင်အပေါ် ဆိုးရွားသော ထိခိုက်မှုများကို လျှော့ချနိုင်ပါသည်။ Max (Myanmar) Hotel Co., Ltd. သည် လုပ်ငန်းလည်ပတ်နေစဉ်အတွင်း ဤအစီရင်ခံစာတွင် ဖော်ပြထားသော ပတ်ဝန်ကျင်အရည်အသွေး သတ်မှတ်ချက်များကို ဆန်းစစ်၍ ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုမှုအစီရင်ခံစာကို ပုံမှန်ဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။ ထို့အပြင် စီမံကိန်းလည်ပတ်နေစဉ်အတွင်း ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် အကောင်အထည်ဖော်မှုနှင့် လျော့ပါးရေး အစီအမံများအတွက် ဘတ်ဂျက်ခွဲဝေမှု အသုံးစရိတ်များကိုလည်း ထည့်သွင်းဖော်ပြထားပါသည်။ ခန့်မှန်းကုန်ကျစရိတ်သည် လုပ်ငန်းအကောင်အထည်ဖော်ဆောင်ရွက်သည့်ကာလနှင့် ဝန်ဆောင်မှုပေးသည့် အဖွဲ့အစည်းပေါ်မူတည်၍ ပြောင်းလဲနိုင်ပါသည်။

Novotel Yangon Max ဟိုတယ်စီမံကိန်းနှင့် ဆက်စပ်နေသော ပတ်ဝန်းကျင်ဆိုင်ရာ သက်ရောက်မှုသည် သတ်မှတ်ထားသော စံချိန်စံညွှန်းများအတွင်းတွင်ရှိပြီး ထိရောက်စွာ စီမံခန့်ခွဲနိုင်သည်။ ထို့ကြောင့် အဆိုပြုထားသော လျော့ပါးသက်သာစေရေးနည်းလမ်းများကို အကောင်အထည်ဖော်ခြင်း၊ စောင့်ကြပ်ကြည့်ရှုရေး

အစီအစဉ်များနှင့် သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာ စွမ်းဆောင်ရည်များကို စဉ်ဆက်မပြတ်တိုးတက် ကောင်းမွန်စွာ ဆောင်ရွက်နိုင်မည်ဖြစ်၍ ဟိုတယ်လုပ်ငန်းဝန်ဆောင်မှုအား ဆက်လက်လုပ်ကိုင်ခွင့်ပြုရန် အကြံပြုအပ်ပါသည်။

အဆိုပြုသူသည် ပြည်ထောင်စုသမ္မတ မြန်မာနိုင်ငံတော်၏ သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာမူဝါဒများ၊ ဥပဒေ၊ နည်းဥပဒေများနှင့် အရည်အသွေးထုတ်လွှတ်မှု လမ်းညွှန်ချက်များကို လိုက်နာရမည်။ ဤအစီရင်ခံစာလေ့လာမှုကို ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနမှ ပြန်လည်သုံးသပ်ပြီးနောက် ပြန်ကြားလာမည့် သဘောထားမှတ်ချက်များနှင့် အကြံပြုချက်များကို စီမံကိန်းအဆိုပြုသူအနေဖြင့် သေချာစွာလိုက်နာဆောင်ရွက်သင့်သည်။ သက်ဆိုင်ရာဌာနမှ အစီရင်ခံစာအတည်ပြုပြီးနောက် စီမံကိန်းအဆိုပြုသူသည် ပတ်ဝန်းကျင်ဆိုင်ရာစီမံခန့်ခွဲမှုအစီအစဉ်များအား ထိရောက်စွာ အကောင်အထည်ဖော်ဆောင်ရွက်ရန် အရေးကြီးပါသည်။

CHAPTER 1 EXECUTIVE SUMMARY

This report is the Initial Environmental Examination (IEE) for Novotel Yangon Max Hotel that proposed by Max (Myanmar) Hotel Company Limited which is operated as a hotel and service business. According to the Myanmar Environmental Conservation Law, 2012, it requires that the proponents of every development project in the country to submit either an Initial Environmental Examination (IEE) or an Environmental Impact Assessment (EIA) to Ministry of Natural Resources and Environmental Conservation (MONREC) depending on the criteria for specific kind of economic activity. The Initial Environmental Examination (IEE) is conducted for the proposed project as indicated in the comments of Environmental Conservation Department (ECD) in Letter No (1366/2024) on April 24, 2024. The hotel has completed its construction in 2015, and currently, is in fully operation since April 2015. The approval of third-party confirmation was received from the ECD on October 23, 2024. Upon approval of the third party, E Guard Environmental Services prepared this IEE report.

The primary baseline environmental condition establishes baseline environmental conditions within the project area on physical, and socio-economic aspects will be collected through direct observation and secondary data from published reports and literature, was conducted by the E Guard Environmental Services study team. The project area is not included in the forest land, reserved forest or protected public forest, consequently, the examination of the biological environment will not be taken into consideration. The team assessed potential impacts for the operation and decommissioning phases. The construction phase was not considered, as the project is already in full operation.

The Novotel Yangon Max Hotel is a luxurious 5-star hotel in Yangon. The estimated investment amount of 56,900 million Kyats (USD 23 million). The hotel is designed as a modern, situated at No. 459, Ward 8, Kamayut Township, Pyay Road, Yangon. The proposed project is constructed and operated with a 366 rooms hotel development on 3.295 acres of project area. The hotel has 8 different types of rooms and suites, soundproof function rooms and appointed meeting rooms. The hotel has been systematically implemented raw water treatment, wastewater treatment systems, air-conditioning systems, sustainable actions for energy and water consumption, waste generation and has occupational health and safety and emergency response plans.

The electricity is distributed through a well-organized system in different towers and areas of the hotel. The hotel will use Yangon Electricity Supply Corporation (YESC) mainly with two 2000 KVA transformers to regulate and distribute power throughout the hotel. and three standby diesel generators (each 1660 KVA) serving as backup power when electricity is cut off. The annual water supply will rely mainly on three tube wells with a diameter of 8 inches and a depth of 360 feet which will be storage for daily use.

The hotel employs a total of 437 local employees, and 3 expatriates which categorized into several service roles for hotel operations. The hotel provides skill personnel training as regard to hotel operations and further arrangement for staffs to go to abroad for advanced training

programs. The necessary expenses for these training programs, including overseas training, have also been planned and budgeted accordingly.

The hotel will generate both solid and liquid wastes categorized into non-hazardous and hazardous as part of its daily operations, and has a waste management system to segregate and dispose of waste materials. Solid waste generated by the hotel is properly treated and disposed of by YCDC, with collection occurring daily. Hazardous waste is stored in clearly labeled containers in a secure area. Cleaning agents used in hotel maintenance and paint are stored in designated areas. Wastewater generated during the operational phase of the hotel includes sewage effluent from the sanitary facilities and wastewater from bathrooms, sinks, kitchens, and showers, then the wastewater is treated in the proposed wastewater treatment system and disposed to the drainage system.

The project proponent for hotel business is Max (Myanmar) Hotel Company Limited, received the permission from Myanmar Investment Commission to implement for hotel business named with Novotel Yangon Max Hotel. The following table shows the description of the project proponent.

Table 1-1 Description of the project proponent

Name of Proponent Company	Max (Myanmar) Hotel Company Limited
Name of Project Proponent	U Bo Chan Tun
Office Address	No. 459, 2nd Floor, Novotel Yangon Max Hotel, Pyay Road, Kamayut Township, Yangon.
Company Registration Number	141433423
MIC Permit Number	939/2013
Type of Business	Hotel Business
Type of Investment	Private Company Limited by Shares
Investment Amount	USD 23 million
Project Timeline	15 years

The responsible person for contacting with project proponent is –

U Toe Tet Htun (Assistant General Manager)

Max (Myanmar) Hotel Co., Ltd.

Novotel Yangon Max Hotel

Contact No.: +959 444 544 434

Email: toetethtun@maxhotelsgroup.com

Preparation of this report was carried out by E Guard Environmental Services on behalf of Max (Myanmar) Hotel Company Limited. The IEE study team has solid academic backgrounds, extensive expertise in environmental impact assessments, EMP formulations, and monitoring, along with appropriate qualifications.

In implementing the IEE, it is essential to adhere to the policies, legislations, and guidelines established in Myanmar. Among them, Environmental Impact Assessment Procedure (2015) and National Environmental Quality (Emission) Guidelines (2015), are considered to be the most important.

The Area of Influence (AOI) for an Initial Environmental Examination (IEE) report concerning the Novotel Yangon Max Hotel Project identifies the geographic region potentially impacted

by the hotel's operation, either directly or indirectly. The study area for this report is defined as a 0.5 km radius around the hotel to access air, soil, and water quality, noise and vibration levels, waste management, and local socioeconomic conditions. Within this area, no sensitive zone, forests, or wetland exists. The surrounding environment primarily consists of commercial businesses, school, universities and residential areas, etc.

Air quality, noise and vibration level, odor and water quality have been measured through direct field observations and assessments on 2nd and 3rd October, 2024. Ambient air quality was assessed by measuring two types of emission: dust emissions (PM_{10}, $PM_{2.5}$) and gas emission (SO_2, NO_2, CO, CO_2). The results are within the limits of standard guidelines. Noise level was measured for twenty-four hours and results were slightly exceeded than the permissible limits. Vibration levels were measured 24 hours continuously and the results are within the permissible limit. The odor was also found to be within acceptable limits, complying with established guidelines. The baseline quality of the groundwater was taken by on-site sampling and laboratory analysis and effluent water was conducted by laboratory analysis at selected locations systematically. Total Suspended Solids (TSS) and oil and grease of effluent water are slightly exceeded than the guideline. For groundwater, the quality is generally good and key parameters are within safe limits. Kamayut Township is an economically significant township and situated at a well-connected area with good transportation. Despite the high traffic volume on this road, it indicates that no traffic congestion with car movement in entrance and out of the hotel gateway.

The Leopold Matrix method was used to evaluate the significance of the proposed project's impacts. The assessment of each impact is based on consideration of the magnitude, duration and frequency of activities, which are going to be carried out during phases, and the characteristics of the project site. All potential environmental impacts were identified during a basic assessment and the quantified significance of those impacts were determined using a ranking scale.

According to the finding's analysis, most project activities occurred with very low and low significance of environmental impacts, while others have a moderate impact that requires improvement in terms of environmental performance. While the hotel contributes positive impact on the local economy by providing jobs and supporting businesses. During the operation phase, most project activities are impact on physical and natural environment, such as water, resource consumption, waste generation, occupational health and safety and fire hazards which have a moderate level of impact significance. During the decommissioning phase, most are the highest number of low significances impacts. And hence, recommended mitigation measures are also described in the study to overcome and mitigate those impacts.

Disclosing project information is crucial for the preparation of the IEE report, and it is essential to consider the opinions of all stakeholders in the finalization process. The purpose of public consultation is to disclose information about the project during the preparation of the IEE report. The public consultation meeting for the proposed project was held on May 21, 2025, in Bagan Ballroom, Novotel Yangon Max Hotel. The public consultation meeting photo record, attendance lists, inquiry and suggestions are detailed in the report.

Mitigation measures are important to minimize and reduce these potential negative impacts. They also describe the requirements of impacts mitigation tasks and technologies according to the types of impacts scales. Additionally, the hotel is expected to generate positive outcomes, such as job opportunities, business prospects and contributions to corporate social responsibility (CSR) initiatives.

The Environmental Management Plan (EMP) for the Novotel Yangon Max Hotel Project was prepared based on an assessment of potential environmental impacts throughout the operation, and decommissioning phases. This evaluation considered the project activities, level of impact significances on environment, baseline environmental data focusing on air quality, noise and vibration, groundwater and wastewater quality, and odor as well as the surrounding area of the project site. Additionally, on-site visits were conducted as part of this process. The EMP serves as a tailored plan designed for the specific project site, ensuring the implementation of the project in an environmentally sustainable manner. To reduce negative impacts on the environment, it ensures that the project is required to apply appropriate mitigation strategies and measures. The proposed EMP for this project include: (i) an environmental management plan for operation and decommissioning phases, (ii) an environmental monitoring plan with specific standard guidelines, (iii) waste management plan, (iv) occupational health and safety management plan, (v) traffic management plan, (vi) emergency preparedness and response plan, (vii) corporate social responsibility plan, and (viii) grievance redress mechanism. Within the environmental impact mitigation plan, recommended measures are outlined to address environmental concerns associated with the operation and decommissioning phases. Therefore, the number of adverse impacts on surrounding environment can be reduced to some extent by related proper mitigation measure mentioned in the study. Max (Myanmar) Hotel Co., Ltd. will conduct a regular environmental monitoring report regularly by examining the environmental quality parameters mentioned in this report for operation phase of hotel project. Moreover, the expenditure for the implementation of EMP and monitoring plan of project phase for budget allocation of mitigation measure and monitoring plan throughout the project life cycle. Estimated prices can change depending on the implementation timeline and the selected service providers.

The environmental impacts associated with the Novotel Yangon Max Hotel project are within acceptable limits and can be effectively managed. Therefore, it is recommended that the project be permitted to continue its operations, subject to the implementation of the proposed mitigation measures, monitoring plans, and continuous improvement in environmental performance.

The proponent must abide by environmental policy, laws, rules, and guidelines of the Republic of the Union of Myanmar. The proponent should follow the comments and suggestions made by ECD after reviewing this IEE report study. Once IEE is approved by concerned authorities, effective implementation of EMP by the project proponent is essential.

CHAPTER 2 PROJECT DESCRIPTION

2.1 Introduction

This report is the Initial Environmental Examination (IEE) for Novotel Yangon Max Hotel that proposed by Max (Myanmar) Hotel Co., Ltd. which is operated as a hotel and service business. The proponent proposed a proposal to the Myanmar Investment Commission to construct the hotel at No. (459), Pyay Road, Kamayut Township, Yangon, Myanmar. The estimated investment amount of hotel is 56,900 million kyats (USD 23 million). It operates as a premium hospitality establishment, providing various amenities designed to cater to both leisure and business travellers.

According to the Myanmar Environmental Conservation Law (2012), it requires that the proponents of every development project in the country must submit an Environmental Management Plan (EMP), or an Initial Environmental Examination (IEE) or an Environmental Impact Assessment (EIA) to the Ministry of Natural Resources and Environmental Conservation (MONREC) depending on the criteria specified in the EIA procedure (2015). The Initial Environmental Examination (IEE) is conducted for the proposed project as indicated in the comments of Environmental Conservation Department (ECD) in Letter No (1366/2024) on April 24, 2024. The hotel has completed its construction in 2015, and currently, is in fully operation since April 2015. The project proponent has commissioned E Guard Environmental Services to prepare the IEE report. A forwarding letter for third-party confirmation, along with a list of licensed consultants, was submitted to the Yangon Environmental Conservation Department on September 10, 2024. The approval of third-party confirmation was received from the ECD on October 23, 2024. Upon approval of the third party, E Guard Environmental Services prepared this IEE report.

2.2 Project Location and Project Size

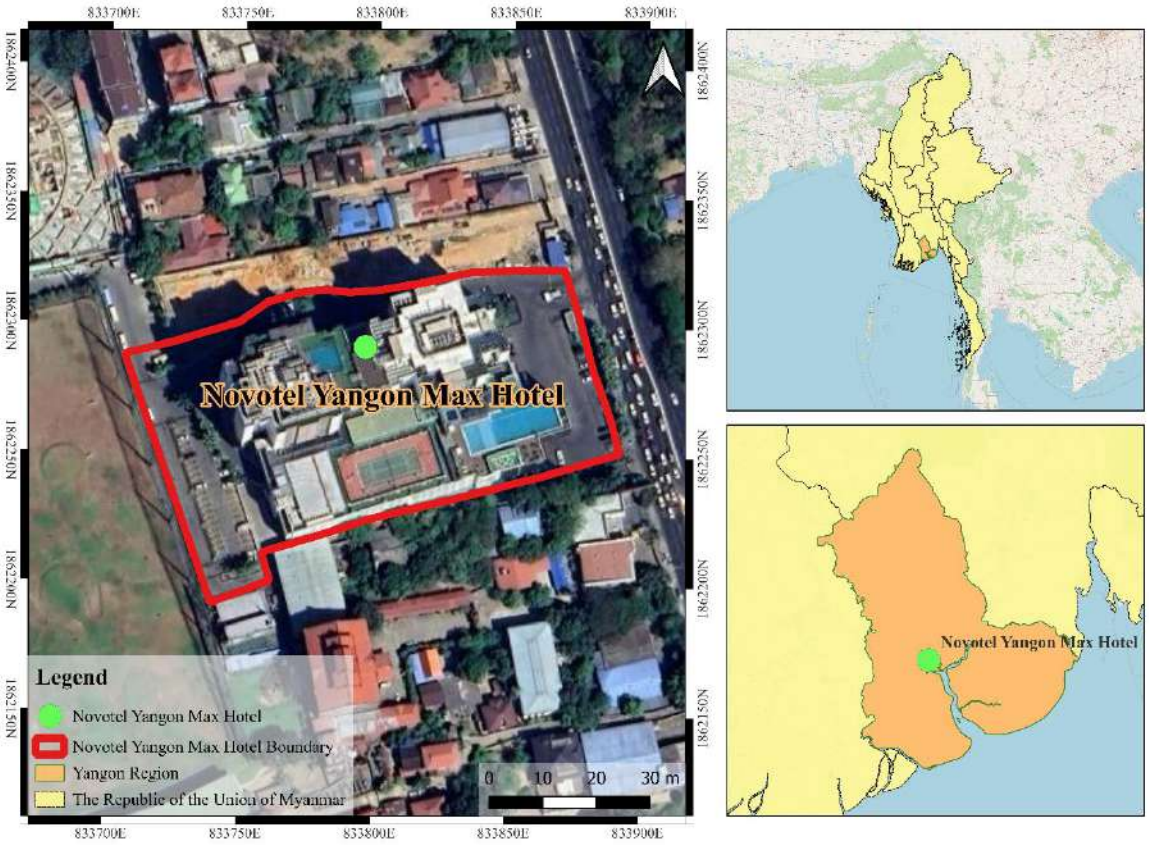
The Novotel Yangon Max Hotel is designed as a modern, located at the coordinates North Latitude 16° 49' 12.25" and East Longitude 96° 7' 54.68" and at No. 459, Ward 8, Kamayut Township, Pyay Road, Yangon. The hotel has access to major commercial, and transportation hubs and benefits from proximity to major highways, public transport systems and a range of local attractions, including Junction Square, University of Medicine 1, Practising School Yangon Institute of Education (TTC), Yangon University Hostels and business district. The location ensures accessibility for both leisure and business travellers, making it an ideal choice for a wide range of guests.

The hotel has designed with Podium, Tower A and B, which has 5 storey, 14 storey and 17 storey RC building including Penthouse. The proposed project is constructed and operated with a 366 rooms hotel development on 3.295 acres of project area and the area is not included in the forest land, reserved forest or protected public forest. The hotel includes a mix of accommodation, dining, recreational, and event facilities to meet diverse customer needs. The hotel has sound proof function room and meeting room that services offered for events such as meetings, conferences, cocktail parties, and wedding ceremonies, restaurants and bars for dining and different types of rooms and suites for accommodation. The hotel also operates an

in-house domestic laundry to manage the cleaning efficiently. With 437 permanent employees, the hotel is providing hotel services and recreation activities.

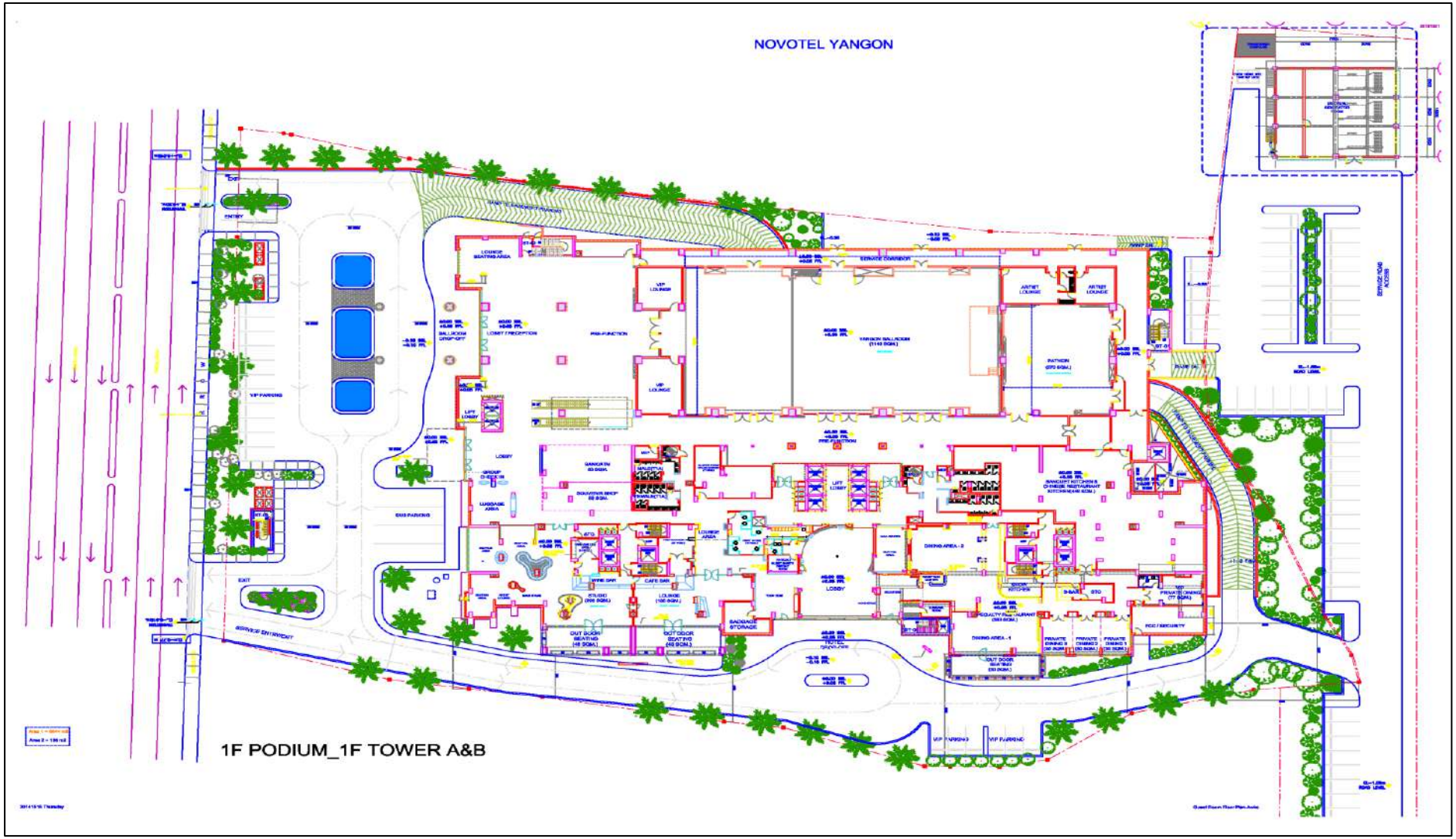
It is equipped with 15 passenger elevators, each with a load capacity of 750 kg. The building includes emergency evacuation routes and fire escapes for safety. In terms of fire protection, the hotel is equipped with 109 hose reels, 338 fire extinguishers and 7 hydrants. The building has a total constructed floor area of 17,988 square meter. It includes 250 parking lots, in compliance with regulations.

The hotel has been using environmentally and eco-friendly technologies for raw water treatment, wastewater treatment systems and air-conditioning systems. The hotel has sustainable actions that will reduce energy and water consumption, waste generation to minimize the environmental footprint by implementing the policies, raising guest awareness and environmental practices.



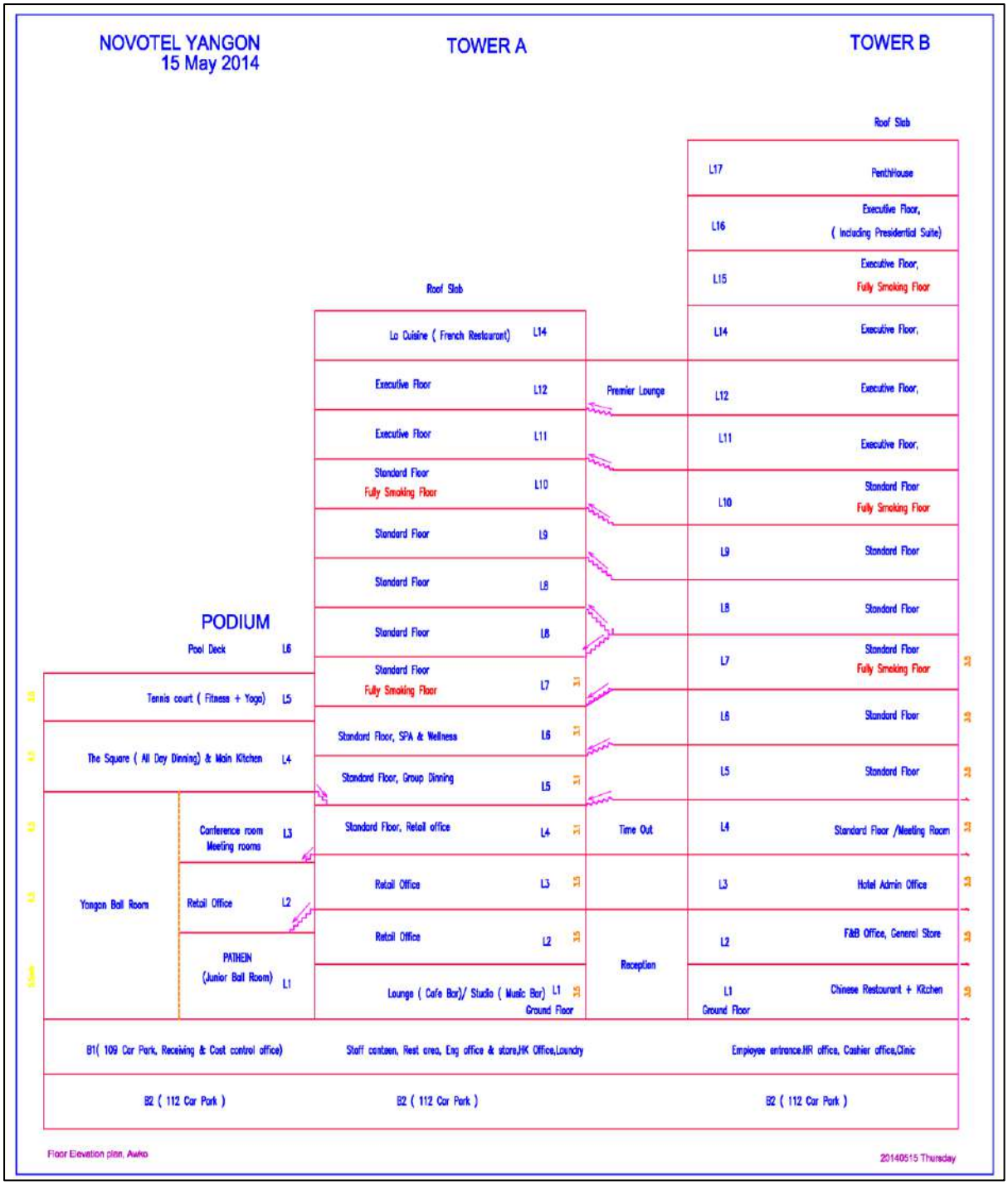
Source: E Guard Study Team

Figure 2-1 Project Location Map



Source: Max (Myanmar) Hotel Co., Ltd.

Figure 2-2 Site Layout Plan



Source: Max (Myanmar) Hotel Co., Ltd.

Figure 2-3 Floor Elevation Plan Operation Activities of the Hotel

The services and facilities provided 8 different types of rooms and suites by Novotel Yangon Max Hotel include the followings:

1. Deluxe room which is 30 sq-m having either king or twin beds.
2. Deluxe suite room area is 70 sq-m having either king or twin.
3. The Executive room offers either one king-size or two twin beds.
4. An Executive suite room which is in size 70 sq-m having either king bed.

5. Premier suite which area is in size 95 sq-m and an ideal option for a family break which is for 6 people.
6. Presidential suite is an impressive 317 sq-m which offers a separate master bedroom, private jacuzzi, living/dining area and fully furnished kitchenette and also for 6 six people.
7. Green room will provide Green Pouch and single-use toiletries instead of plastic. This Green Room initiative is supporting the socioeconomic development of Myanmar Communities and contributing to the light for life project which is providing solar lights to communities in Myanmar that do not have electricity.
8. Premier lounge which will be provided complimentary internet Wifi access and charged extra food and beverage accordingly to the consumption.

Facilities for staff and guests are well-equipped. Restrooms and guest lounges are available at multiple levels: Basement 1, Level 1, Level 3, Level 4 and Level 5 which have each two restrooms.

Deluxe Room

Deluxe Suite Room

Executive Room

Executive Suite Room

Premier Suite

Presidential Suite

Green Room

Premier Lounge

Figure 2-4 Types of Rooms and Suites in the Novotel Yangon Max Hotel

There are 9 well-appointed meeting or function rooms designed for event facilities such as meetings, conferences, cocktail parties, and wedding ceremonies, and more. These rooms are capable of accommodating up to 1,120 people. In addition, the hotel offers a variety of leisure and dining options, including one outdoor swimming pool, SPA, gym and 8 restaurants: the Square, Le Cellier, Gourmet Bar, Time Out Sports Bar, Pool Bar, In-Room Dining, Bar Code, Takumi-Ya Japanese Restaurant and Seafood Paradise.

Bagan Ballroom

Bago Ballroom

Mandalay Ballroom

Nay Pyi Taw Ballroom

Pyay Ballroom

Yangon Ballroom

Business Hotel Meeting Room

Function Ballroom

Figure 2-5 Meeting, Function Room and Ballrooms at Novotel Yangon Max Hotel

The Square is an all-day dining restaurant offering international and Asian flavours. The Le Cellier offers the most amazing rooftop dining view in Yangon, while the Gourmet Bar is a place to experience a place to enjoy the best coffee in town, a quick lunch or dinner, light snacks, or unique tea. Time Out Sports Bar, located on the 4th floor, provides an entertainment venue for guests. The Pool Bar, situated on the 6th floor, making it an ideal spot to relax and reenergize. In-Room Dining is available 24 hours a day, allowing guests to dine right at their door. Bar and Karaoke Lounge- Bar Code is a fun spot for a night out with friends or colleagues, combining KTV and a Bar Lounge, located on the 3rd floor and is also the perfect venue for hosting parties. Takumi-Ya Japanese restaurant is the best of Japanese style and top-quality meats and attentive service on the 4th floor. The seafood paradise is a perfect dining venue of Singapore-style seafood and Chinese cuisine to cozy for family gatherings and corporate events.

Gourmet Bar

Le Cellier

The Square

Bar Code and Karaoke Lounge

Outdoor Pool

Gym

Seafood Paradise

Pool Bar

Figure 2-6 Restaurants and Bars at Novotel Yangon Max Hotel

Hotel buildings are equipped with up-to-date electrical and communication systems, closed circuit TV (CCTV) system, fire alarm and protection system, water supply and sanitation system, cold and hot water system, air condition, ventilation system, and wastewater treatment system. Tree fences are strategically placed along the hotel zone boundary, while the pavement features native landscaping enhanced with trees adorned with decorative lighting for nighttime aesthetics.

2.3 Resource Consumption

The project is designed to have modern facilities, and dedicated to protecting the environment and commitment to sustainable practices to make a meaningful, positive impact on the environment. For electricity needs, the hotel will use Yangon Electricity Supply Corporation (YESC) mainly and diesel generators serving as backup power when the electricity is cut off. Air conditioning will be installed and used in specific areas of outdoor and indoor. The annual water supply will rely mainly on groundwater from three tube wells which will be storage for daily use. The hotel also features an outdoor swimming pool, which requires additional water usage for maintenance and operation. The water supply system includes both cold and hot water systems to meet the diverse needs of guests and hotel operations, ensuring comfort and efficiency.

2.3.1 Electricity and Fuel Consumption

The electricity is distributed through a well-organized system in different towers and areas of the hotel. The Novotel Yangon Max Hotel provides electricity mainly by Yangon Electricity Supply Corporation (YESC), using two 2000 KVA transformers to regulate and distribute power throughout the hotel. In case of power outages, three standby diesel generators (each 1660 KVA) supply electricity to all guest rooms and public areas.

The hotel uses about 25,000 kWh of electricity each day, totalling around 750,000 kWh per month. To save energy, it uses LED lights, motion sensors in low-use areas, and efficient air conditioning systems, including 160 indoor and 750 outdoor AC units. Refrigeration systems using 410A and 134A are installed in kitchens and storage areas. The hotel also consumes around 423 gallons of diesel daily (about 13,208 gallons per month), mainly for generators, with fuel supplied by Max Energy. It has a total fuel storage capacity of 3,600 gallons (2,000 gallons for generators and 1,600 for vehicles), ensuring continued operation. Main electrical distribution for substation and tower system models are described in Appendix.

Generator

2.3.2 Water Consumption

Water consumption is another aspect of hotel operations. The total water requirement is 55,000 gallons per day and 1,650,000 gallons per month. The primary source of water is groundwater from three tube wells inside hotel compound, with a diameter of 8 inches and a depth of 360 feet. The amount of water pumped from the tube wells range between 66,000 to 79,500 gallons per day.

Water is stored in multiple storage tanks with the following capacities 40,000 gallons, 35,000 gallons, 30,000 gallons, 28,000 gallons, and 19,500 gallons, bringing the total storage capacity to 152,500 gallons. Water is primarily used for daily processes and domestic usage, with a daily consumption of 55,000 gallons for daily processes and 66,000 to 79,500 gallons for domestic use. The water supply system of the hotel is described below. Purified drinking water is provided for both guests and employees.

Tube Wells

2.3.3 Manpower Requirement

The hotel employs a total of 437 local employees, and 3 expatriates. The workforce is categorized into several service roles for hotel operations. Service providers include security personnel, doormen, receptionists, bell men, waiters/waitresses, housekeepers, and other staff. Specific staff numbers are as following table. Employees work on a schedule of 8 hours per day and 5.5 days per week, with 1.5 days off. The hotel operates six main shifts to provide facilities for employees. To support staff well-being, the hotel provides accommodation and meal facilities as needed. Dormitory accommodations are available for night shift staff, especially during late hours. Furthermore, all staff members receive breakfast and one duty meal during work hours

Table 2-1 Number of Employees

Employee	Total (Person)
Security Personnel	38
Doormen	65
Receptionists	24
Bellman	9
Waiter/ Waitresses and Housekeepers	105
Other operational Staff including Expatriates	199

Source: Max (Myanmar) Hotel Co., Ltd.

Training will be provided to staff members regarding hotel operations, and skilled personnel will be further trained to enhance their expertise and improve their performance. Additionally, arrangements have been made for the staff to go to abroad for advanced training programs aimed at further strengthening their skills and capabilities. The necessary expenses for these training programs, including overseas training, have also been planned and budgeted accordingly.

Figure 2-7 Training Photo Records

2.4 Waste Generation

The hotel will generate both solid and liquid wastes categorized into non-hazardous and hazardous as part of its daily operations, primarily from guest activities, food services, housekeeping, maintenance and landscaping. The hotel has an effective waste management system to segregate and dispose of waste materials. Cleaning agents used in hotel maintenance and paint are stored in designated areas.

2.4.1 Solid Waste Management

The hotel employs a waste segregation system, as dry waste and general waste. There are two kitchens, and wet waste from food preparation is temporarily stored before collection by YCDC for final disposal. Dry waste is first sorted into several categories such as plastics, papers, cans etc. Solid waste generated by the hotel is properly treated and disposed of by YCDC, with collection occurring daily.

Hazardous waste is stored in clearly labeled containers in a secure area. Staff are well trained to handle this waste in proper procedures. Hazardous waste will dispose of through licensed hazardous waste management services, in accordance with environmental regulations.

Figure 2-8 Solid Waste Disposal

2.4.2 Liquid Waste Management

Wastewater generated during the operational phase of the hotel includes sewage effluent from the sanitary facilities and wastewater from bathrooms, sinks, kitchens, and showers. This wastewater will be treated within the proposed wastewater treatment system. The hotel has a wastewater treatment system in place to handle wastewater disposal. The treatment system processes approximately 250-300 cubic meters of water per day. The sewage system does not incorporate recycling, and domestic wastewater is disposed of through a proper drainage system leading to the final disposal site. The wastewater treatment plant ensures compliance with environmental standards.

Figure 2-9 Drainage System

2.5 Raw Water Treatment System

The raw water treatment system at Novotel Yangon Max Hotel is designed to provide clean and safe water for domestic use. Raw water from the tube wells first goes through a flow switch and enters the chlorinated water tank. In this tank, chlorine is added using a chemical dosing system.

After chlorination, the water is pumped by three transfer pumps to the sand filter of filtration units which removes suspended particles. Subsequently, the water passes through two carbon filters. These filters help to remove bad smell, chlorine, and other unwanted substances. The next process is to pass through three cartridge filters that clean out any remaining small particles.

The treated water is then stored in a tank, and ready for use in the hotel. Flow switches are installed to control water movement. The system is controlled by an automatic panel to operate efficiently and helps to make sure that the hotel has a reliable and safe water supply for guests and staff.

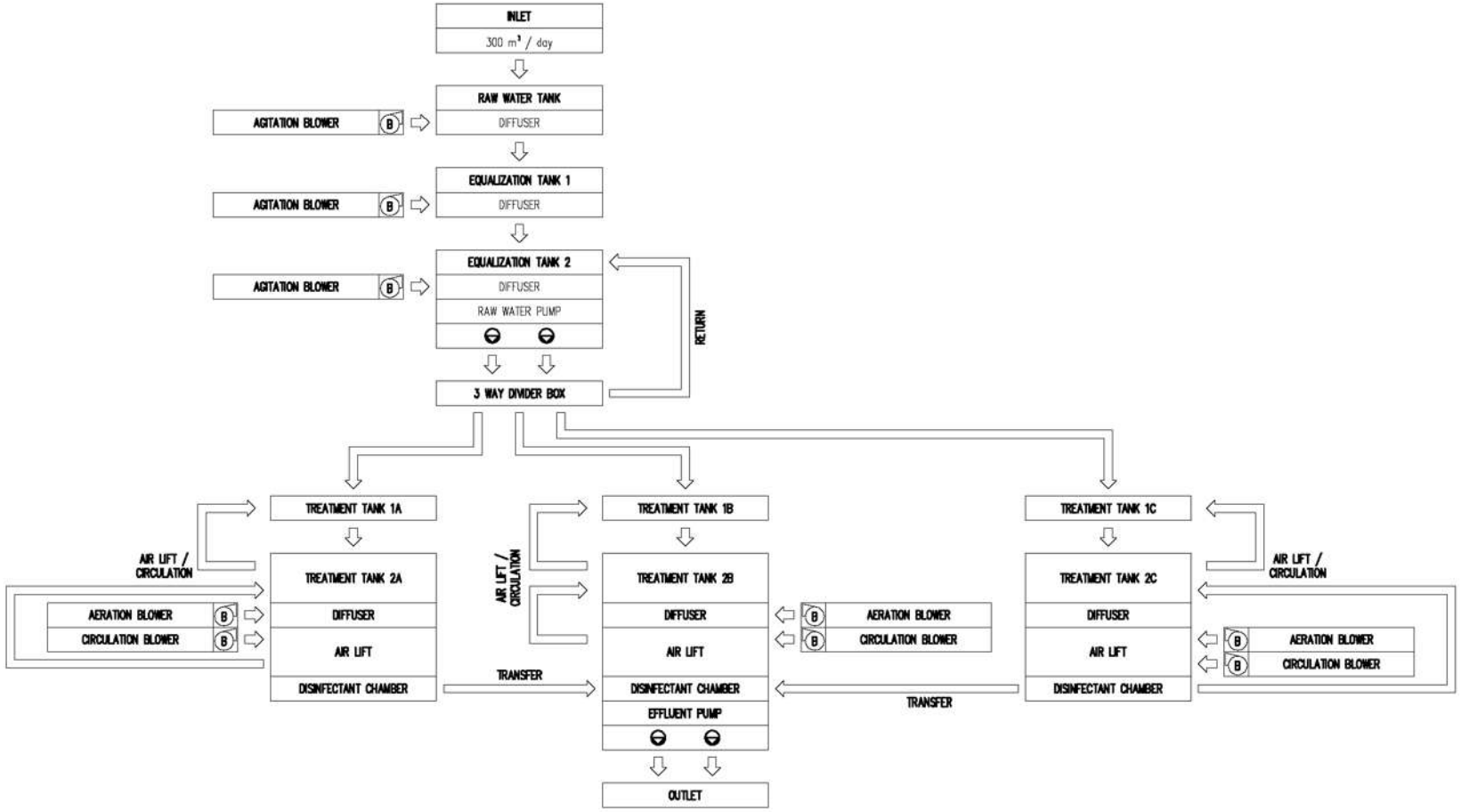
Figure 2-10 Raw Water Treatment System

2.6 Wastewater Treatment System

Wastewater treatment system at the hotel is designed to treat up to 300 m³ of wastewater per day from various sources like bathrooms, kitchen, and laundry. Wastewater enters the water tank diffuser, where it begins its treatment process. It is then directed to Equalization Tanks 1 and 2, which is equipped with diffusers and agitation blowers to mix and aerate the water.

The water is pumped through a 3-way divider box to multiple treatment tanks labeled as 1A, 1B, 1C, and subsequently, passing through the 2A, 2B, and 2C. These tanks are equipped with aeration and circulation blowers, and diffusers to promote biological treatment and remove pollutants from the water.

After treatment, the water flows into disinfectant chambers where it is further cleaned and disinfected. The treated effluent is then transferred and pumped out using effluent pumps to the final outlet for safe discharge.



Source: Max (Myanmar) Hotel Co., Ltd.

Figure 2-11 Wastewater Treatment System

2.7 Sustainable Actions of Novotel Yangon Max Hotel

Novotel Yangon Max Hotel demonstrates a strong commitment to sustainability through various initiatives aimed at environmental conservation, community engagement, and resource efficiency.

Community Engagement

The Novotel Yangon Max Hotel works with local organization to promote sustainability, encourage inclusivity, and assist community well-being. For a day of water therapy exercises in the hotel pool and service training, the hotel welcomed students and members of the Myanmar Down Syndrome Association. For people with Down syndrome, these programs open doors to personal growth and communal integration. In addition, the hotel was dedicated to safeguarding children's rights and fighting against any kind of child sex exploitation.

Eco-friendly Amenities

The hotel offers eco-friendly facilities like dental kits and shower caps made from natural and biodegradable materials like corn starch and wheat straw in the guest rooms, to mitigate the impact on the environment. These materials decompose within 90-days, waste is significantly reduced. The hotel also makes use of environmentally friendly packaging, such as calcium carbonate stone paper. The hotel supports local companies while lowering its carbon footprint and single-use plastics by buying these eco-friendly products locally.

Since October 2018, Novotel Yangon Max Hotel has significantly reduced plastic waste by replacing plastic water bottles with reusable water jars and refill stations. This initiative not only provides guests with more accessible drinking water during their stay but also contributes to the global effort to eliminate single-use plastics.

Energy Conservation and Waste Reduction

The hotel implements several energy-efficient practices and environmental footprint to minimize energy use and waste management. Energy-efficient practices to reduce electricity consumption are as follow:

- Installation of LED lighting throughout the hotel
- Use of motion-sensor lights in low-traffic areas
- Implement efficient HVAC systems

The hotel implements waste management with a comprehensive program that includes recycling, composting food waste, and minimizing single-use plastics. Guests are encouraged to participate in towel and linen reuse programs, conserving water and reducing detergent use.

Water Management

The hotel implements water management to reduce consumption and promote sustainability. These include:

- Installation of water-efficient fixtures such as low-flow faucets, showers, and toilets
- Implementation of water recycling processes, including the reuse of treated water for landscaping and other non-potable needs

Sustainable Food and Beverage Choices

The hotel is using local seasonal fruits and vegetables, locally grown produce. This practice not only reduces the carbon emissions associated with food transportation but also promotes local farming. In the kitchen, responsible food sourcing, portion control, and composting practices are employed to minimize food waste while ensuring fresh, high-quality meals for guests.

2.8 Occupational Health and Safety Plan

Novotel Yangon Max Hotel follows a comprehensive Occupational Health and Safety (OHS) plan to ensure a safe and healthy environment for both staff and guests. As part of its commitment to international safety standards, the hotel adopts the Hazard Analysis and Critical Control Point (HACCP) system, particularly in food preparation and handling areas which ensures that all food served is safe, hygienic, and prepared under strict safety protocols.

In addition to food safety, the hotel's overall OHS measures include staff training on hygiene, equipment handling, and emergency procedures; the use of Personal Protective Equipment (PPE); the installation and maintenance of fire alarms, extinguishers, and emergency exits; and the availability of first aid kits with trained responders. Regular safety inspections and risk assessments are also conducted, and a system is in place for reporting and addressing workplace incidents. Hazardous materials such as cleaning chemicals are safely stored and handled to minimize health risks.

2.9 Emergency Response Plan

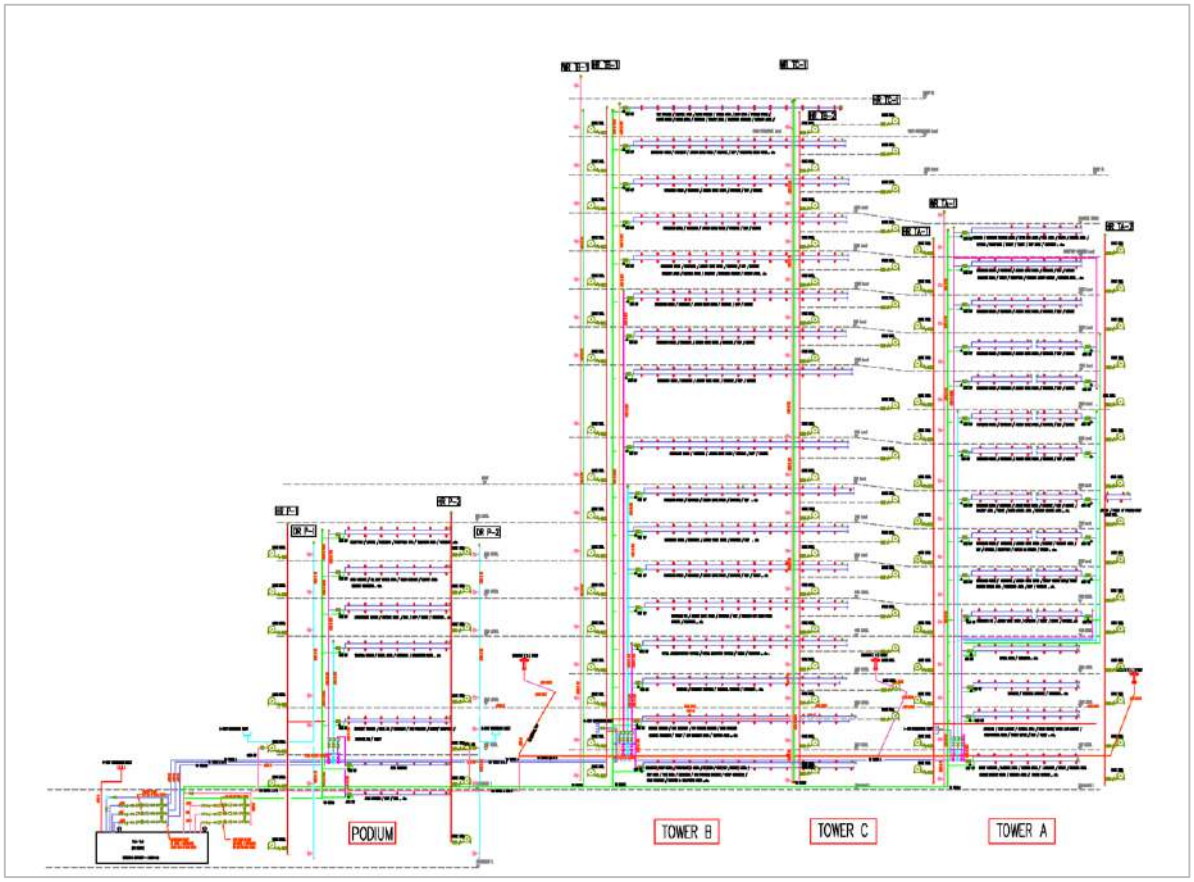
A systematic Emergency Response Plan has been developed and implemented at the hotel. The plan outlines clear procedures and responsibilities for effective actions before and during emergencies. It is designated to the implementation of essential safety measures such as fire alarm system, hose reels, sprinkler systems and no-smoking areas.

2.9.1 Firefighting System

As part of the firefighting system for the hotel, a comprehensive fire alarm and system has been installed throughout the building, including all towers and each level. The system is designed to ensure early detection, prompt warning, and efficient fire control in case of emergencies.

The fire alarm system is installed on every floor, including common areas like the rooftop restaurant, gym, and technical rooms. Each floor is equipped with smoke detectors, heat detectors, and manual alarm call points. The system uses fire-resistant cabling connected to a fire alarm loop panel on each floor. These loop panels send signals to the main fire control

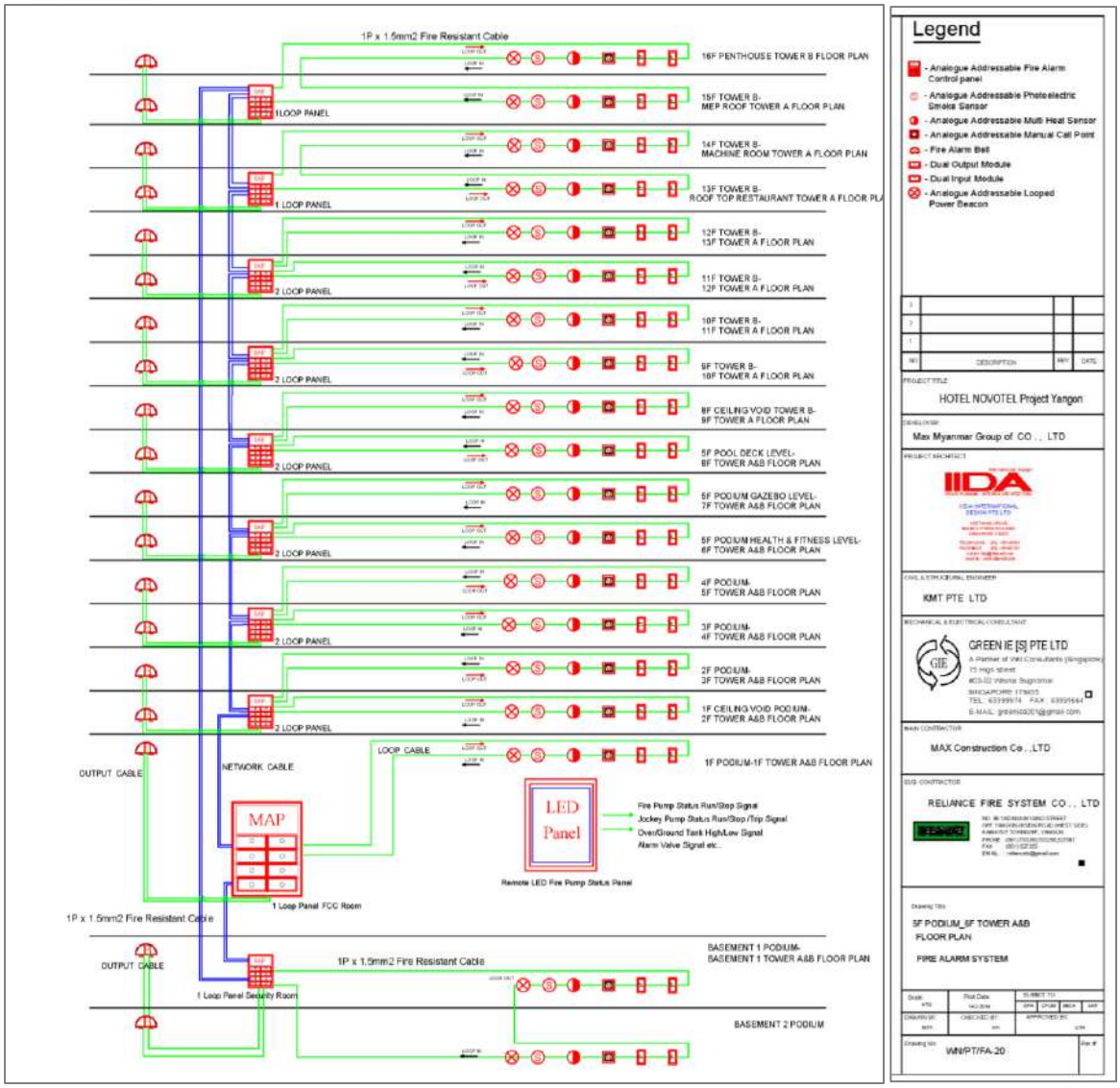
panel in the Fire Command Center (FCC). An additional remote LED panel is used to show the fire pump status, including main pump and jockey pump activity, and water tank signals.



Source: Max (Myanmar) Hotel Co., Ltd.

Figure 2-12 Hose Reels Sprinkler Schematic Diagram

Ffurthermore, the firefighting system includes automatic sprinklers, 106 hose reels, and 7 fire hydrants connected to a reliable wet riser system, all supplied by a dedicated 30,000-gallon water tank. In total, 338 fire extinguishers are distributed throughout the building for immediate response. Fire hose reels are also installed on each floor for manual use by trained personnel.



Source: Max (Myanmar) Hotel Co., Ltd.

Figure 2-13 Fire Alarm System

The designated emergency assembly point is located in front of the hotel on the Pyay Road side. All fire safety equipment is maintained and tested regularly to ensure full functionality. The design and installation follow international fire safety standards and local building codes to provide a safe environment for guests and staff.


HYDRANT
CABINET


HYDRAN
CABINET


1
1


PL 10
NOVOTEL
DURING EMERGENCY


NO SMOKING

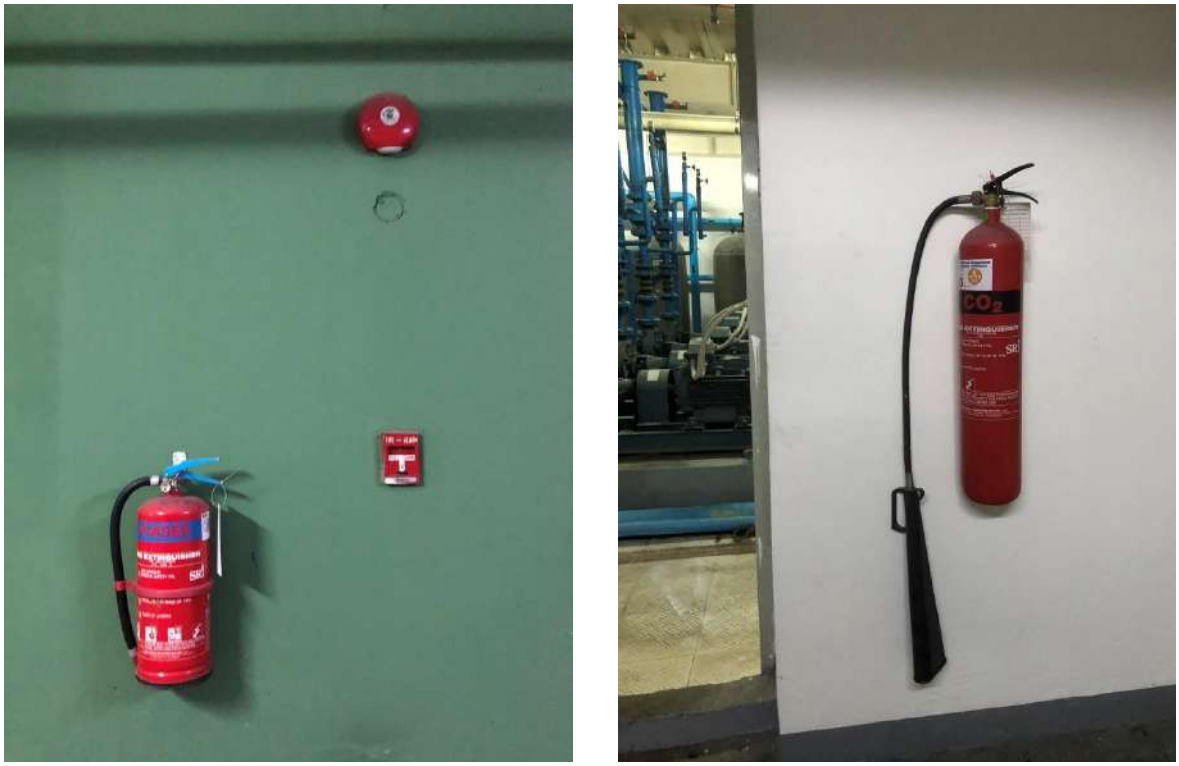


Figure 2-14 Fire Safety Facilities

CHAPTER 3 IDENTIFICATION OF THE PROJECT PROPONENT

3.1 Project Proponent Description

The project proponent for hotel business is Max (Myanmar) Hotel Company Limited, which is a private company limited by shares. It has been granted the company registration number of 141433423 and already received the permission from Myanmar Investment Commission to implement for hotel business named with Novotel Yangon Max Hotel. The proposed project duration will take 15 years. The estimated total investment plan of the proposed project is USD 23 million (56,900 million Kyats) for the proposed project.

Table 3-1 Description of the project proponent

Name of Proponent Company	Max (Myanmar) Hotel Company Limited
Name of Project Proponent	U Bo Chan Tun (Managing Director)
Office Address	No. 459, 2nd Floor, Novotel Yangon Max Hotel, Pyay Road, Kamayut Township, Yangon.
Company Registration Number	141433423
MIC Permit Number	939/2013
Type of Business	Hotel Business
Type of Investment	Private Company Limited by Shares
Investment Amount	USD 23 million
Project Timeline	15 years
Contact Person	U Toe Tet Htun (Assistant General Manager)
Phone Number	(959) 444544434
Email	toetethtun@maxhotelsgroup.com

The responsible person for contacting with project proponent is –

U Toe Tet Htun (Assistant General Manager)

Max (Myanmar) Hotel Co., Ltd.

Novotel Yangon Max Hotel

Contact No. +959 444 544 434

Email; toetethtun@maxhotelsgroup.com

3.2 Organization Chart of the Hotel

The organization chart of the Novotel Yangon Max Hotel, Max (Myanmar) Hotel Company Limited as shown in the following:

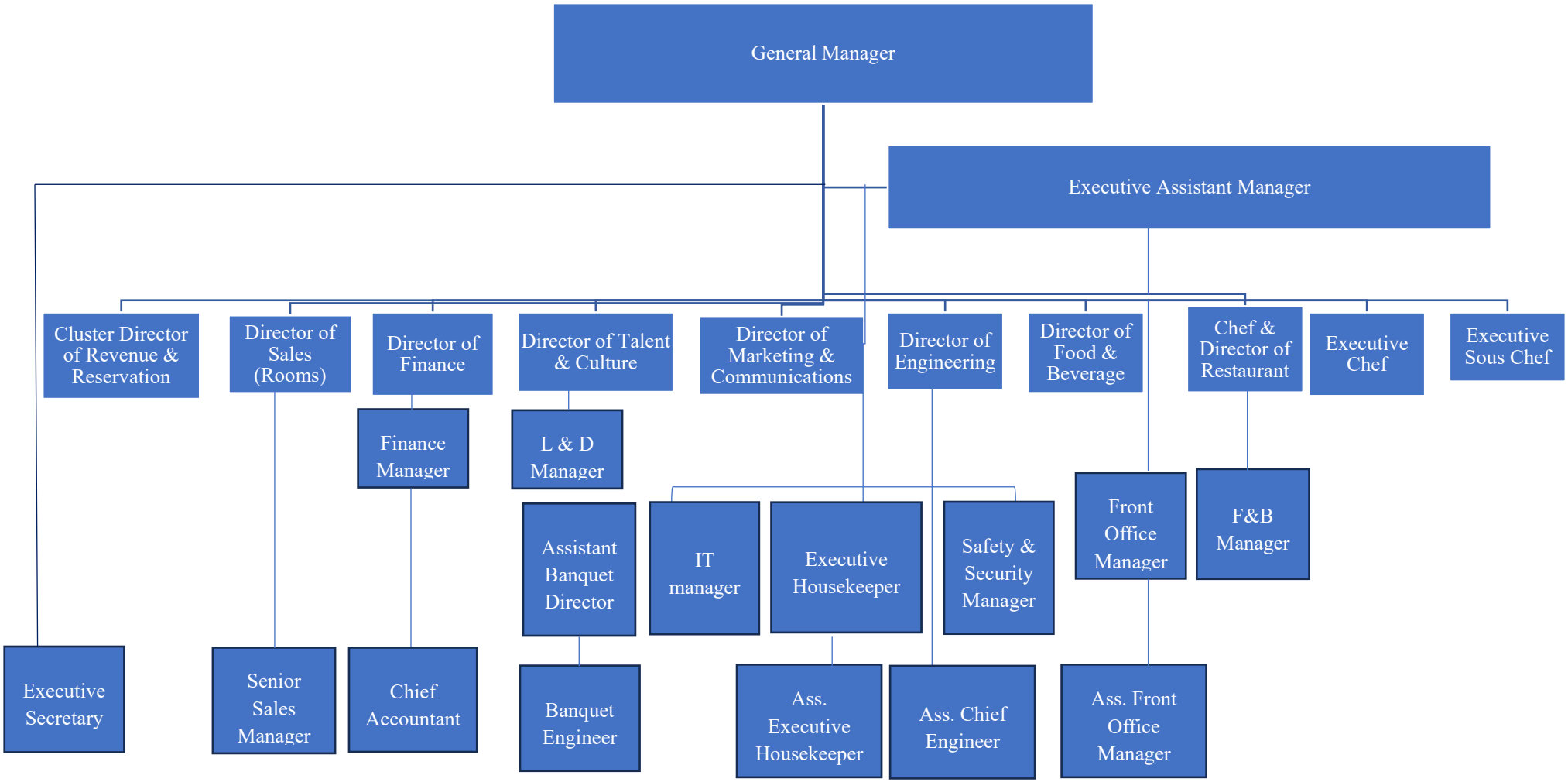


Figure 3-1 Organization Chart of Novotel Yangon Max Hotel

CHAPTER 4 IDENTIFICATION OF THE INITIAL ENVIRONMENTAL ASSESSMENT (IEE) EXPERTS

4.1 Study Team for Environmental and Social Experts

E Guard Environmental Services was established in July 2013 to provide environmental services. E Guard is registered with the Directorate of Investment and Company Administration (DICA), Ministry of Investment and Foreign Economic Relations (MIFER), Myanmar. Dedicated to providing environmental-related services, E Guard is one of the recognized registered third-party consultant companies by the Environmental Conservation Department (ECD), and the Ministry of Natural Resources and Environmental Conservation (MONREC). E Guard prepared this IEE report with the following study team members.

The third-party firm, E Guard Environmental Services, which is a licensed third-party consultancy study team members who work for preparing this IEE report is as follows:

Table 4-1 IEE Study Team and their Responsibilities

No.	Name	Position	License No	Area of Expertise	Responsibility of Expertise in this Report
1	Daw Thein Mwe Khin	Team Leader	EIA-C 006/2023	Ecology and Biodiversity Social Study and Analysis	Social Study and Analysis
2	U Soe Min	Team Member	EIA-C 031/2023	Hydrology, Surface Water and Ground Water Conservation Water Pollution Prevention, Control, Monitoring, and Prediction of Impacts Air Pollution Prevention and Control	Water Pollution Prevention, Control, Monitoring, and Prediction of Impacts
3	U Tin Aung Moe	Team Member	EIA-C 055/2024	Geological Assessment Ecology and Biodiversity Soil Conservation Land Use	Ecology and Biodiversity
4	U Aung Myint Myat	Team Member	EIA-C 008/2023	Ecology and Biodiversity Noise and Vibration	Noise and Vibration
5	U Si Thu Aung	Team Member	EIA-AC 094/2024	Hydrology, Surface Water and Ground Water Conservation Water Pollution, Prevention and Control, Monitoring and Prediction of Impacts	Hydrology, Surface Water and Groundwater conservation
6	Daw Thet Mhue Khin	Team Member	EIA-C 054/2024	Solid Waste and Hazardous Management	Solid Waste and Hazardous Management
7	U Thaw Tar Htun	Team Member	EIA-C 007/2023	Air Pollution Prevention and Control Water Pollution, Prevention and Control, Monitoring and Prediction of Impacts Meteorology, Air Quality Assessment and Forecast	Air Pollution Prevention and Control
8	Daw May Thu Win	Team Member	EIA-AC 003/2023	Legal Study and Analysis	Legal Study and Analysis

No.	Name	Position	License No	Area of Expertise	Responsibility of Expertise in this Report
9	U Aung Si Thu Thein	Team Member	EIA-AC 006/2023	Natural Resources Management Ecology and Biodiversity Land Use	Land Use
10	Daw Moe Sat Wathan	Team Member	EIA-AC 098/2024	Archeology and Cultural Heritage	Archaeology and Cultural Heritage
11	Daw Jaint Yadanar	Supporting Team Member	Supporting Staff	Social Study and Analysis	Social Study and Analysis
12	Daw Htoo Myat Noe Oo	Supporting Team Member	Supporting Staff	Archeology and Cultural Heritage	Archeology and Cultural Heritage

1) Daw Thein Mwe Khin (Team Leader)

Daw Thein Mwe Khin is a Senior Consultant, who holds her license to conduct the environmental impact assessment with her expertise in social study and analysis and Economy and Biodiversity. She received her master's degree in Regional and Rural Development Planning from the Asian Institute of Technology in 2019 and her bachelor's degree in forestry from the University of Forestry in 2013. She worked as a social expert in the Yangon Outer Ring Road Construction Project, the Hanthawaddy New International Airport Development Project, and the Wataya Bridge Construction project. She had experience working as a survey team leader for the YCRL Updating Project and Dry Zone Water Supply Project in 2014, 2015, and 2016 respectively. She had experience working as a core team member of the social team, preparing RAP for the construction of Kyarkalay Bypass and 2 Bridges and RAP for the construction of Thaton Bypass and 2 Bridges in 2014. In addition, she has a project leader role in the preparation of four IEE reports for various types of projects, tender preparation, many social surveys, and FGDS for various EIA/IEE/EMP projects during around five years of working life in the EIA field. She also studied the socioeconomic impact of rural electrification on the well-being of rural households in the central dry zone, Myanmar as her master thesis in 2018.

Daw Thein Mwe Khin contributed to Social Study and Analysis as a team leader of this IEE study.

2) U Soe Min (Director)

U Soe Min is a director of E Guard Environmental Services Co., Ltd (well known as E Guard). He is also a principal consultant of the company responsible for the successful implementation of the environmental-related projects overseeing and coordinating the various aspects of the EIA process. His environmental consultant license number is EIA-C 031/2023.

He is a civil, water resources, and environmental engineer. He received a Bachelor of Civil Engineering Degree (B.E, Civil) from Rangoon Institute of Technology (RIT) Yangon and pursued a Master of Environmental Engineering (M.E) from the Asian Institute of Technology (AIT) Bangkok, Thailand. He had worked and trained in water resources engineering, irrigation, and drainage engineering disciplines for a decade-long period in his career development.

As a civil water resources engineer, he was involved in water resources development projects from investigation and feasibility studies to planning, design, and construction. He had experience with local and international practices in design, construction management, and contractual documentation. He had overseas worked experiences in Thailand and Singapore. He had worked as a local environmental consultant for various technical assistant projects of ADB and World Bank supporting capacity-building projects in strengthening environmental safeguard systems in Myanmar.

He has a keen interest in environmental monitoring and the establishment of environmental data acquisition systems. He provides capacity-building training and knowledge sharing on

topics related to Environmental Protection and Safeguarding. Taking the role of a principal consultant at E Guard, currently, he is leading the local consultant team and collaborating with international consultant firms providing environmental-related services in Myanmar.

U Soe Min provides his expertise on Water Pollution Prevention, Control, Monitoring, and Prediction of Impacts in this IEE study area.

3) U Tin Aung Moe (Director)

U Tin Aung Moe is a consultant who holds License EIA/C-055/2024 described expertise is - Geological Assessment, Land Use, Ecology and Biodiversity and Soil Conservation. He is one of the founding members of E Guard. He has been working on Environmental Assessment Environmental Technologies development and capacity building for Developing countries in Asia and the Pacific Region. He is responsible for the policy and institutional linkages and harmonization of E Guard.

U Tin Aung Moe has contributed to the Ecology and Biodiversity of this IEE study as well as the project management and report review.

4) U Aung Myint Myat (Consultant)

U Aung Myint Myat is a consultant, who holds consultant registration number EIA-C 008/2023 and has expertise in Ecology and Biodiversity and Noise and Vibration. He has a Bachelor's Degree in Forestry from the University of Forestry and Environmental Science in 2014. He also got a full-time Diploma in Environmental Impact Assessment and Environmental Management System from Yangon Technological University in 2019 and a Diploma in GIS&RS from Dagon University. He has more than ten years of experience in conducting an environmental site inspection, socio-economic surveys and data interpretation, negotiating with clients, government authorities, and local people to conduct stakeholder engagement and public consultation meetings, Environmental Quality measurement and data analysis and also reporting for EMP, IEE & ESIA of various nature of the project. He also conducts the preparation of socio-economic questionnaires, scoping of the study area, Environmental Quality data analysis, Environmental and social impact assessment, biodiversity survey, analysis, and reporting.

As a member of this IEE study, he has taken the responsibility in the area of expertise on Noise and Vibration.

5) U Si Thu Aung (Consultant)

U Si Thu Aung is a Consultant at E Guard Environmental Services Co. Ltd. He gained his Civil Engineering Degree from Thanlyin Technological University in 2014. He also pursued his Master's Degree in Environmental Engineering at Yangon Technological University in 2018 while he started his career with E-Guard. He is also a Registered Engineer (Water Supply and

Sanitation) at Myanmar Engineering Council and holds Associate Consultant License No. 094/2024 with Hydrology, Surface Water and Groundwater Conservation, and Water

Pollution Prevention, Control, Monitoring and Prediction of Impact expertise from Environmental Conservation Department. Through his time at E-Guard, he has been involved in the preparation of ESIA, related reports and in negotiation with relevant stakeholders such as Report Writing, Stakeholders Engagement, Secondary Data Collection, Site Investigation, Impact Assessment, Mitigation Measures and Environmental Management Plan, etc. He has worked in Myanmar EIA Field and in a range of different local and international projects over six years. His quest for seeking out new sources and making friends for data collection led to him assist his primary works and providing information to the organization and colleagues. Currently, he is working in the organization as a motivated and collaborative team player.

As a member of this IEE study team, he supported in the area of Hydrology, Surface Water, and Groundwater Conservation.

6) Daw Thet Mhue Khin (Senior Consultant)

Daw Thet Mhue Khin is a Senior Consultant and holds consultant license number EIA-C 054/2024 to conduct the environmental impact assessment in Solid and Hazardous Waste Management. She holds a Master of Civil Engineering which specializes in Environmental Engineering from Yangon Technological University, Yangon in 2014. She is familiar with not only conducting reconnaissance surveys but also environmental impact assessments. Also, she has a total 7-year experience including master's research in “Water Supply Network Analysis for Minbu District”, and over six years of experience in water pollution control waste management, risk assessment, environmental management plans and systems, occupational health safety and environment, civil engineering and data interpretation. She is also a Registered Engineer (Water Supply and Sanitation) at the Myanmar Engineering Council and a Member of the Myanmar Environmental Assessment Association. Also, she had worked as a Civil Engineer at CS Construction and Geotechnical Pte. Ltd. for over three years in Singapore.

In this IEE study, she has taken on the responsibility in the area of expertise on Solid Waste and Hazardous Waste Management as a team member.

7) U Thaw Tar Htun (Consultant)

U Thaw Tar Htun is a consultant working on EIA project reporting in E Guard Environmental Services Co., Ltd. since 2018 who holds Consultant License No. EIA-C 007/2023, described expertise in water pollution prevention, control, monitoring and prediction of impacts, air pollution prevention and control, and meteorology, air quality assessment and forecast. He received a Bachelor of Civil Engineering from Taunggyi Technological University in 2011 and a Master of Engineering in (International Graduate Program in Environmental and Water Resources Engineering) from Mahidol University, Thailand in 2016. He had experience in environmental fields for 9 years including his master’s degree research, “Mathematical Modelling Wastewater Collection System in Cha-Am Municipality using PCSWMM”. His

master thesis paper was presented at the 3rd International Conference on Civil, Biological and Environmental Engineering Conference, Phukhet, Thailand. With the experience of 8 years, he had been engaged in many projects for Environmental Impact Assessment study, Identification of Impacts and Analysis, formulation of mitigation measures and Environmental Management Plan. He had also worked as a Sub Assistant Engineer in Engineering Department (Water and Sanitation) at Naypyitaw Development Committee, Naypyitaw from August 2012 to October 2017.

As a team member of this IEE study, U Thaw Tar Htun contributed to Air Pollution Prevention and Control.

8) Daw May Thu Win (Assistant Consultant)

Daw May Thu Win is working as an Assistant Consultant in E-Guard Environmental Services Co., Ltd. and holds Consultant License No. EIA-AC 003/2023, described expertise in Legal Study and Analysis. She obtained her Bachelor's degree in Law from East Yangon University (Tarwa) in 2018. Currently, she is attending a postgraduate diploma course in International Law at Yangon University. She is currently assisting in preparing Laws, Rules, Regulations, Policies, Directions, and Notifications used for environmental reports, public consultations, and information-gathering processes. As a legal expert, she has the responsibility of Legal study and analysis of this project. She will mainly contribute to the Legal study and Analysis of this IEE study.

9) U Aung Si Thu Thein (Consultant)

U Aung Si Thu Thein is a consultant, who holds Consultant License No. EIA-AC 006/2023, described expertise in (1) Natural Resources Management (Forestry), (2) Ecology and Biodiversity, and (3) Land Use. He received his Bachelor's Degree in Forestry from the University of Forestry in September 2015. He also received a Post Graduate Diploma in Geographic Information Systems from the Dagon University in February 2018. Moreover, he pursued his Master of Science Degree in Natural Resources Management from the Asian Institute of Technology, Thailand in May 2020. He has almost seven years of experience in the preparation of Environmental Impact Assessments, Environmental Management Plans, and Initial Environmental Examination Reports for various development projects as a Lead Environmental Consultant and in participation in many Environmental Impact Assessment and Resettlement Action Plan projects for development projects in Myanmar. He had two years experience in research conducting with regard to the impacts assessment of natural resources management systems on the livelihood of local people. Moreover, he has many experiences in communication with project proponents, government authorities and local people, project-affected persons, CSOs, stakeholder engagements public consultation meetings conduction, and socio-economic surveys.

U Aung Si Thu Thein has contributed to Land Use as a member of this IEE study team.

10) Daw Moe Sat Wathan (External Consultant)

Moe Sat Wathan is an External Consultant working on Cultural Heritage Assessment for the EIA project reporting in E Guard Environmental Services Co., Ltd. since 2023. She has an official associate consultant license from Ministry of Natural Resources and Environmental Conservation in May 2024. She also co-operated in HIA (Heritage Impact Assessment) reporting of Sittaung Bridge project and YORR (Yangon Outering Road) project under E Guard Environmental Service Co., Ltd. She received Bachelor of Honors in Archaeology from University of Mandalay in 2019. She finished Master of Archaeology from University of Mandalay in 2021. She had experiences in the field of cultural heritage management for 3 years including her master degree research entitled "Cultural Landscape of Amarapura Old city (1782-1853CE): Attribute of the significant remains of archaeological context". She presented a part of her master thesis titled on Approaching Heritage Management Plan for Ancient cityscape of Amarapura Old City (1784-1858 CE) at 22nd Indo Pacific Prehistory Association (IPPA) congress, 2022, Chaing Mai, Thailand. Her research paper titled on "The inscription 17 lines on the bronze bell donated by crown prince, one of the sons of King Badon" was presented and published in the proceeding of 2020 YUFL international conference on Languages and Humanities. Her research paper on Public Spaces in U Bein virtually presented at conference of Public Spaces in Historic Cities- Conservation Principals and Good Practices by ICOMOS Theophilos, Florence, Italy, 2023. She was selected to participate in Myanmar-Canada Archaeological Research Project (IRAW@Bagan) from 2018 to 2019 in Bagan for the peri-urban settlement archaeological research and excavation. Recently she participated in the Vietnam-Canada Archaeological Research Project (IRAW@Hualu) at Hanoi, Vietnam in 2022. Now she is actively participating in Underwater Archaeological Conservation Workshop organized by UNESCO and APASARA authority of Cambodia.

In this IEE study, she has taken on the responsibility in the area of Archaeology and Cultural Heritage.

11) Daw Jaint Yadanar (Associate Consultant)

Daw Jaint Yadanar is an Associate Consultant who has educational background in forestry, environmental and social fields. As an Associate Consultant, she has to conduct Environmental Management Plan (EMP), Initial Environmental Examination (IEE), Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA) for the development projects, extractive projects and other large-scale projects which may have serious environmental and social impacts on the environment and communities. Furthermore, she also has experiences on environmental site surveys, socio-economic surveys and cooperation with relevant stakeholders and clients for stakeholder's engagement and public consultations.

Daw Jaint Yadanar contributed to Social Study and Analysis as a supporting expert in this IEE study.

12) Daw Htoo Myat Noe Oo (Project Assistant)

Daw Htoo Myat Noe Oo has been a Project Assistant at E Guard Environmental Services company. She holds a Bachelor of Arts in Anthropology from the University of Yangon, along with an SQA diploma in Project Management and an ABE level 5 diploma in Business Management. With over 3 years of experience, she actively contributed to various community development and non-formal education projects. She contributed to the E Guard Environmental Services projects by assisting with socioeconomic aspects.

Her involvement in the projects is to

- Collect baseline project information, socio-economic data
- Correlate the impact and impact mitigation of the projects with the stipulated laws and regulations
- Assist in document preparation, filing, and data entry
- Coordinate travel arrangements, meetings, and communication with stakeholders
- Support in organizing public consultations and outreach activities.

Daw Htoo Myat Noe Oo contributed to Archaeology and Cultural Heritage as a supporting expert in this IEE study.

CHAPTER 5 OVERVIEW OF POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

5.1 Introduction

This section reviews the relevant policies, legislations, and institutional framework of Myanmar and international guidelines relevant to the context of the environmental and socioeconomic aspects of the project. The activities carried out under the project are subject to these legal requirements.

5.2 Policy and Legal Framework, Including Existing Applicable Laws and Rules

The following legislations constitute the key components of the legal framework for environmental conservation in Myanmar:

National Environmental Policy of Myanmar (2019)

The national environmental policy builds on 1997 Myanmar Agenda 21, the 2009 National Sustainable Development Strategy. It is grounded in the environmental responsibilities in the 2008 Constitution of the Republic of the Union of Myanmar, and the obligations contained in the 2012 Environmental Conservation Law.

Environmental Conservation Law (2012)

The principal law governing environmental management in Myanmar is the Environmental Conservation Law, which was issued in March 2012.The law stipulates that government bodies be in charge of environmental conservation as well as their relevant roles and responsibilities. It touches on water, noise, vibration, and solid waste qualities but does not provide specific standards to be met. It also mentions that any new development project must perform a system of Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA) in order to find out whether or not a project or activity to be undertaken by any government department, organization or person may cause a significant impact on the environment or not. In the context of project development, it is important to note that the law adopts the notion of "Polluter Pays Principle" as it implies that the project proponents are responsible for covering all environmental and social costs generated by the project.

Environmental Impact Assessment Procedures (2015)

The objectives of the EIA Guidelines are to provide a common framework for EIA reporting, to present project proponents and their environmental consultants with clear guidance on structure, content, and scope of EIA reports and to ensure that EIA reporting is consistent with legal requirements, good practices, and professional standards. The guidelines pay special attention to providing on preparing easily understandable EIA reports. The procedures also include a clause for public participation in implementing the IEE and EIA. Concrete steps for undertaking the EIA, is stipulated in the EIA procedures.

National Sustainable Development Strategy (2009)

The concept of sustainable development was developed by the Brundtland Commission Report (1987) which defined sustainable development as "development which meets the needs of the present without compromising the ability of future generations to meet their own needs'. At the United Nations Conference on Environment and Development (UNCED) held in Rio De Janeiro, Brazil in 1992, governments were urged to pursue the National Sustainable Development Strategy (NSDS). Johannesburg Plan of Implementation (JPOI) adopted in 2002 at the World Summit on Sustainable Development (WSSD) also called upon countries to take immediate steps to make progress in the formulation and elaboration of the NSDS and begin their implementation by 2005. The United Nations Department of Economic and Social Affairs (UN-DESA) lucidly defines the National Sustainable Development Strategy as "a coordinated, participatory, and interactive process of thoughts and actions to achieve economic, environmental, and social objectives in a balanced and integrated manner at the national and local levels.

National and International Conventions Relevance to Project

The project developer is responsible for overseeing the activities related to the project and ensuring compliance with the following guidelines and standards:

Table 5-1 National and International Conventions of Relevance to Project

Legislation	Relevance to the Project	Ratification Status in Myanmar
Vienna Convention for the Protection of the Ozone Layer 1988 and Montreal Protocol on Substances that Deplete the Ozone Layer 1989	Not directly relevant, as the project will not use ozone- depleting substances.	Accession September 16, 1998 (Vienna) & Accession November 24, 1993 (Montreal)
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (1989)	The Project may generate hazardous wastes, such as used oils, batteries and chemicals.	Entered into force April 6, 2015
Stockholm Convention on Persistent Organic Pollutants (2001)	Relevant as the project must ensure safe use and disposal of chemicals used in maintenance and cleaning.	Accession April 19, 2004
United Nations Framework Convention on Climate Change (UNFCCC) (1992) and Paris Agreement (2015)	The hotel will adopt sustainable practices, such as energy efficiency and waste reduction, to align with climate change mitigation efforts.	Ratified: November 29, 2005 (UNFCCC), September 19, 2017 (Paris Agreement)
International Finance Corporation (IFC) Performance Standard on Cultural Heritage (2012)	Provide guidelines to manage environmental and social risks including protection of heritages, avoidance and minimization of impact, chance find procedures and community engagement.	-

Legislation	Relevance to the Project	Ratification Status in Myanmar
The Burra Charter Practice Note on Understanding and Assessing Cultural Significance (ICOMOS, 2013)	The practical assessment of cultural landscape and ensure the development respects aesthetic, historical, social and spiritual values.	-
Yangon Building Regulations Draft by Yangon City Development Committee (YCDC)	The regulations to align with the existing ones when developing major public building complexes in proximity to historically significant or monumental areas and urban conservation zones.	-

5.3 National and International Standards and Guidelines

5.3.1 Relevant Laws and Legislation of the Project

Every citizen has the duty to assist the Union carrying out the environmental conservation under sub-section (b) of section 390 of the Constitution of the Republic of the Union of Myanmar (2008). There are 42 relevant legislations pertinent, standards and guidelines for the proposed project to natural and social environment areas in Myanmar as follows:

For the Environment,

1) National Environmental Policy of Myanmar (2019)
2) National Land Use Policy (2016)
3) The Environmental Conservation Law (2012)
4) The Environmental Conservation Rules (2014)
5) Environmental Impact Assessment Procedure (2015)
6) National Environmental Quality (Emission) Guidelines (2015)
7) National Sustainable Development Strategy (2009)
8) National Drinking Water Quality Standards (2019)
9) National Surface Water Quality Standards (2024)

For Investment and Insurance,

10) Myanmar Investment Law (2016)
11) Myanmar Investment Rules (2017)
12) The Myanmar Insurance Law (1993)

For Public Health,

13) The Public Health Law (1972)
14) Prevention of Hazard from Chemical and Related Substances Law (2013)
15) The Prevention and Control of Communicable Diseases Law (1995)
16) The Control of Smoking and Consumption of Tobacco Product Law (2006)

For Occupational Health and Safety,

17) Occupational Health and Safety Law (2019)

Implement of this project, the following laws are required for Labors

18) The Labor Organization Law (2011)
19) The Settlement of Labor Dispute Law (2019)
20) Employment and Skill Development Law (2013)
21) The Minimum Wedges Law (2013)
22) The Payment of Wages Law (2016)
23) The Leaves and Holidays Act (1951)
24) The Social Security Law (2012)
25) Workmen's Compensation Act (1923)

For Biodiversity and Water Resource Conservation

26) The Conservation of Water Resources and Rivers Law (2006)
27) Law Amending the Conservation of Water Resources and Rivers Rules (2020)
28) Under Groundwater Act (1930)
29) The Forest Law (2018)
30) The Conservation of Biodiversity and Protected Areas Law (2018)

Other necessary laws for this project

31) The Myanmar Tourism Law (2018)
32) The Myanmar Tourism Rules (2020)
33) Myanmar Hotel and Tourism Law (1993)
34) The Law Amending the Myanmar Engineering Council Law (2022)
35) The Myanmar Fire Brigade Law (2015)
36) The Electricity Law (2014)
37) Natural Disaster Management Law (2013)
38) The Protection and Preservation of Cultural Heritage Regions Law (2019)
39) The Protection and Preservation of Antique Objects Law (2015)
40) The Protection and Preservation of Ancient Monuments Law (2015)
41) Myanmar Companies Law (2017)
42) Consumer Protection Law (2019)

The following laws and regulations related to the implementation of the project mentioned in Table 5-2 will be followed by Max (Myanmar) Hotel Co., Ltd.

Table 5-2 Relevant Legislation for the Novotel Yangon Max Hotel Project

No.	Laws and Regulation	Relevant Articles	Commitments
1	National Environmental Policy of Myanmar (2019)	Mission	To achieve a clean environment, with healthy and functioning ecosystems, that ensures inclusive development and well- being for all people in Myanmar

No.	Laws and Regulation	Relevant Articles	Commitments
		Vision	To establish national environmental policy principles for guiding environmental protection and sustainable development and for mainstreaming environmental considerations into all policies, laws, regulations, plans, strategies, programs, and projects in Myanmar.
2	National Land Use Policy (2016)	Objectives	To promote sustainable land use management and protection of cultural heritage areas, environment, and natural resources in the interest of all people in country.
3	The Environmental Conservation Law (2012)	Objectives Sub-section (o) of Section 7, Section 14, 15, 24, 25, 29	To construct a healthy and clean environment and to conserve natural and cultural heritage for the benefit of present and future generations; to maintain sustainable development through effective management of natural resources and to enable to promotion of international, regional, and bilateral cooperation in matters of environmental conservation. The Project Proponent commits to- Pay the compensation for damages if the project causes injuries to the environment Purify, emit, dispose and keep the polluted materials in line with the stipulated standards. Install or use the apparatus that can control or help to reduce, manage, control, or monitor the impacts on the environment Allow relevant governmental organizations or departments to inspect whether performing is in conformity with the terms and conditions included in prior permission, stipulated by the ministry, or not Comply with the terms and conditions included in prior permission Abide by the stipulations included in the rules, regulations, by-laws, orders, notifications, and procedure
4	The Environmental Conservation Rules (2014)	Rule 69 (a,b)	The Project Proponent commits to Avoid emitting, discharging, or disposing the materials that can pollute to environment, or hazardous waste or hazardous material prescribed by notification in a place that directly or indirectly injures to public Avoid performing damage to the ecosystem and the environment generated by said ecosystem
5	The Environmental Impact Assessment Procedure (2015)	Paragraphs 102 (a, b), 103, 104, 105, 106, 107, 108, 109, 110, 113, 115, 117	Project Proponent commits to Be liable for all adverse impacts caused by doing or omitting of project owner or contractor, sub-contractor, officer, employee, representative or consultant who is appointed

No.	Laws and Regulation	Relevant Articles	Commitments
			or hired to perform on behalf of the project owner Support, after consultation with affected persons by the project, relevant government organizations, government departments, and other related persons, to resettlement and rehabilitation for livelihood until the affected persons by the project receive a stable socio-economy which is not lower than the status in pre-project Implement all commitments of the project and conditions included in EMP. Moreover, the project proponent has to be liable for the contractor and sub-contractor who perform on behalf of him/her have to fully abide by the relevant laws, rules, this procedure, EMP, and all conditions Be liable and fully & effectively implement all requirements included in ECC, relevant laws and rules, this procedure and standards Inform the completed information, after specifying the adverse impacts caused by the project, from time to time Monitor all adverse impacts in the pre-construction phase, construction phase, operation phrase, suspension phrase, closure phrase, and post-closure phrase, moreover has to implement the EMP with abiding all conditions included in ECC, relevant laws & rules, and this procedure Submit, as soon as possible, the failures of his or her responsibility, other implementation, ECC or EMP. If dangerous impact caused by this failure or failure should be known by the Ministry the project proponent has to submit within 24 hours and other than this situation has to submit within 7 days from knowing it Submit the monitoring report dually or prescribed time by Ministry in line Allow the inspector to inspect the contractor and sub-contractor who implement on behalf of the project
6	National Environmental Quality (Emission) Guidelines (2015)	Objectives	The project proponent has to emit, discharge, or dispose of in line with the standards stipulated in said guideline.
7	National Sustainable Development Strategy (2009)		The concept of sustainable development was developed by the Brundtland Commission Report (1987) which defined sustainable development as “development which meets the needs of the present without compromising the ability of future

No.	Laws and Regulation	Relevant Articles	Commitments
			generations to meet their own needs'. At the United Nations Conference on Environment and Development (UNCED) held in Rio De Janeiro, Brazil in 1992, governments were urged to pursue the National Sustainable Development Strategy (NSDS). Johannesburg Plan of Implementation (JPOI) adopted in 2002 at the World Summit on Sustainable Development (WSSD) also called upon countries to take immediate steps to make progress in the formulation and elaboration of the NSDS and begin their implementation by 2005. The United Nations Department of Economic and Social Affairs (UN-DESA) lucidly defines the National Sustainable Development Strategy as "a coordinated, participatory, and interactive process of thoughts and actions to achieve economic, environmental, and social objectives in a balanced and integrated manner at the national and local levels.
8	National Drinking Water Quality Standards (2019)	Scope and Coverage Objective	This standard is applicable to drinking water available in Myanmar. This is not applicable to bottled drinking water and shall apply to all water works officials, developers and operators of water supply system both government and private entities, all establishments and authorities, the general public and all other concerned. The objective of the National Drinking Water Quality Standards is as follow- To promote public health, safety and welfare by ensuring quality
9	National Surface Water Quality Standards (2024)	Objectives	To conserve surface water quality for the protection of human health, aquatic life and the living environment through defining surface water quality goals of a specific waterbody or portion thereof by designating the uses of water and by setting criteria necessary to protect the existing and designated uses of the surface water. To provide the water quality levels where attainable for the protection on appropriate use of water and for controlling effluents to ensure the surface water is suitable for the said analysis methods for water quality assessment, enforcement and supervision of the standards.
10	The Myanmar Investment Law (2016)	Objectives	To ensure the appointment of employees, fulfilling the rights of employees, avoiding any

No.	Laws and Regulation	Relevant Articles	Commitments
			injury to the environment, social and cultural heritage, ensure the prescribed insurance in line with the above law.
		Sub-section (d) of Section 50, Sub-section (b, c, d) of Section 51, Sub-section (g, i, j, k, l, m, o, p, q) of Section 65, Section 73	The Project Proponent commits to Register the land lease contract at the Registration of Deeds Office in accordance with the Registration of Deeds Law Appoint the nationalities in the various levels of administrative, technical and expert work by the arrangement to develop their expertise Appoint the nationalities only in normal work without expertise Appoint either foreigner or nationality with the appointment agreement in accordance with the law Comply with the international best practices, existing laws, rules, and procedures to not damage, pollute, or injure to environment, cultural heritage, and society Close the project after paying the compensation to the employees in accordance with the existing laws if violate the appointment agreement or terminate, transfer or suspend the investment or reduce the number of employees. Pay the wages or salary to the employees in accordance with the laws, rules, orders, and procedures in the suspension period. Pay the compensation or injured fees to the respected employees or their inheritors if injury in or loss of part of body or death caused by work Stipulate the foreign employees to respect the culture and customs and abide by the existing laws, rules, orders, and directives Abide by labor laws. Pay the compensation, to the injured person for damages if damage to the environment or socio-economy is occurred by misuse of the project. Inspect in anywhere of project if the Myanmar Investment Commission informs to inspect the project. Obtain the permission of MIC before the EIA process and report back this process to Myanmar Investment Commission Insure the prescribed insurance by rules.
11	Myanmar Investment Rules (2017)	Section 202 Section 203 Section 206	The Project Proponent commits to Comply with the conditions of the permit issued by MIC and applicable laws when making the investment Assist while negotiating with the authority for settling the grievance of the local community which has been affected due to investment

No.	Laws and Regulation	Relevant Articles	Commitments
		Section 212	If the project proponent is desirous to appoint a foreigner as senior management, technician expert, or consultant according to section 51(a) of the Law. The project proponent has to submit such foreigner's passport, expertise evidence, or degree and profile to the Commission Office for approval under section 206 of said law. Ensure the relevant insurance out of the following types of insurance at any insurance business entitled to carry ort insurance business within the Union based on the nature of the business: Property and Business Interruption Insurance; Engineering Insurance; Professional Liability Insurance; Bodily Injury Insurance; Marine Insurance; or Workmen's Compensation Insurance; Life Insurance; Fire Insurance.
12	Myanmar Insurance Law (1993)	Objectives Sections 15, 16	The project can cause damage to the environment and injuries to the public so to ensure the needed insurances are insured at Myanmar Insurance. The Project Proponent commits to Use the owned vehicles the project owner has to insure the insurance for the injured person Ensure the insurance to compensate for general damages because the project may cause damages to the environment and injury to the public
13	Public Health Law (1972)	Objectives Section 3, 5	To ensure public health include not only employees but also resident people and cooperation with the authorized person or organization of health department. The Project Proponent commits to Abide by any instruction or stipulation for public health Allow any inspection, anytime, anywhere, if necessary
14	Prevention of Hazard from Chemical and Related Substances Law (2013)	Objectives	To ensure to use the hazardous chemical and related substances safely and safety for the employees. Moreover, safety in carrying the hazardous chemical and related substances and storage place of it. If it is needed to train how to use the safety dresses which provided to the employees with free of charges. Insure to compensate for injury to a person or damage to the environment.

No.	Laws and Regulation	Relevant Articles	Commitments
		Sub-section (a, b) of Section 15, Sub-Section (a, b, c, d, e, f, g, h, i) Section 16, 17, 22, Sub-section (a, c) of Section 27	The project has to be inspected for the safe use of hazardous chemicals and related substances before starting the project. The project owner has to Be inspected for the safety and resistance of the machinery and equipment by the respective Supervisory Board and Board of Inspection before starting the business Assign the employees, who will serve with the hazardous chemicals and substances, to attend the training on the prevention of hazardous chemicals and substances in local or abroad Abide by the conditions included in the license Abide by and assign to the employees who serve in this work to abide by the instructions for safety in using hazardous chemicals and related substances Arrange enough safety equipment in the workplace and provide safety dresses to the employees who serve in this work free of charge Train, in the workplace my arrangement, the know-how. to use the occupational safety equipment, personal protection equipment, and safety dresses systemically in the workplace Allow the receptive Supervisory Board and Board of Inspection to inspect whether the hazard may injure to health of humans or animal or damage to environment Assign healthy employees who have obtained the the recommendation that is fit for this work after taking medical check-ups and keeping the medical records of employees Inform the copy of storage permission for hazardous chemicals and related substances to the relevant township administrative office Obtain approval with instructions from the relevant fire force before starting the work if the project will use the fire hazard substances or explosive substances Transport only a limited amount of the chemical and related substances in accordance with the prescribed stipulations in local transportation Insure, in accordance with the stipulations, to pay compensation if the project causes injury to a person or animals or damage to the environment. Abide by the conditions included in the registration certificate. Moreover, will abide

No.	Laws and Regulation	Relevant Articles	Commitments
			by the orders and directives issued by the Central Supervisory Board from time to time Classify the level of hazard to protect it in advance according to the properties of chemical and related substances Provide the safety equipment, and personal protection equipment to protect and reduce accidents and assign to attend the training to use the equipment systematically employees who serve in this work free of charge Train, in the workplace my arrangement, the know-how. to use the occupational safety equipment, personal protection equipment, and safety dresses systemically in the workplace Allow the receptive Supervisory Board and Board of Inspection to inspect whether the hazard may injure to health of humans or animal or damage to environment Assign healthy employees who have obtained the the recommendation that is fit for this work after taking medical check-ups and keeping the medical records of employees Inform the copy of storage permission for hazardous chemicals and related substances to the relevant township administrative office Obtain approval with instructions from the relevant fire force before starting the work if the project will use the fire hazard substances or explosive substances Transport only a limited amount of the chemical and related substances in accordance with the prescribed stipulations in local transportation Insure, in accordance with the stipulations, to pay compensation if the project causes injury to a person or animals or damage to the environment. Abide by the conditions included in the registration certificate. Moreover, will abide by the orders and directives issued by the Central Supervisory Board from time to time Classify the level of hazard to protect it in advance according to the properties of chemical and related substances Provide the safety equipment, and personal protection equipment to protect and reduce accidents and assign to attend the training to use the equipment systematically.

No.	Laws and Regulation	Relevant Articles	Commitments
15	Prevention and Control of Communicable Disease Law (1995)	Objectives Sub-section (a) of Section 3 Clause (9), 4, 9, 11	To ensure a healthy work environment and prevention the communicable diseases through cooperation with the relevant health department. The Project Proponent commits to Build the housing in line with the health standards, distribute healthful drinking water & using water, and arrange to systematically discharge the garbage & sewage Abide by any instruction or stipulation by the Department of Health and Ministry of Health Inform promptly to the nearest health department or hospital if the following is occurred Mass death of animals in birds or chickens; Mass death of mouse; Suspense of occurrence of communicable disease or occurrence of communicable disease; Occurring of communicable disease which must be informed Allow any inspection, anytime, anywhere if it is needed to inspect by the health officer
16	The Control of Smoking and Consumption of Tobacco Product Law (2006)	Objectives Sub-section (a,b,c,d) of Section 9	To ensure the creation of smoking areas and non-smoking areas in the power plant area for health and control of smoking. The project proponent commits to Keep the caption and mark referring that is non-smoking area in the project area Arrange the specific place for smoking in the project area and keep the caption and mark in accordance with the stipulations Supervise and carry out the measures so that no one shall smoke in the non-smoking area Allow the inspection of the supervisory body in the power plant area
17	Occupational Health and Safety Law (2019)	Objectives Section 12	To effectively implement measures related to safety and health in every industry and to set occupational safety and health standards. The project proponent has to Appoint a person in charge of occupational safety and health according to the type of industries to closely supervise the safety and health of the workers in accordance with the specifications of the Ministry. Establish each occupational Safety and Health Committee comprising an equal number of employers and workers' representatives according to the types of industry without lessening the number of workers prescribed by

No.	Laws and Regulation	Relevant Articles	Commitments
			the Ministry to be a safe and healthy workplace, in accordance with the specifications of the Ministry. In establishing the Committee, occupational safety and health matters for female workers shall be considered according to the nature of work under subsection (a) and (b) of section 12 of said law.
		Section 14	The project proponent has to comply with this Law and the rules, orders, directives, and procedures issued under this Law to be a safe and healthy workplace under section 14 of said law.
		Section 16	The inspectors shall inspect the workplace under this Law for occupational safety and health, instruct the respective employer on the facts to be observed, and report to the chief inspector under section 16 of said law. For the purposes of occupational safety and health in line with the code of conduct, inspectors are entitled to; Enter, inspect, and examine any workplace applicable to this Law without a warrant by showing their identity cards at any time; Inspect and copy all records, books, and documents relating to the workplace and process, and seize any of them as exhibits, if necessary; Take photographs and video records of the workplace situations and processes that may be harmful to occupational safety and health; Assess and record the amount of impact and time on the workplace environment, due to noise, illumination, temperature, dust, fume, and hazardous materials, with the assistance of an expert on the respective subjects, if necessary. Inquire any person working at the workplace during working hours about contracting occupational diseases or potential situations with the assistance of a certified doctor;
		Section 17	Ask the responsible person from hospitals and medical clinics to confidentially send the medical report of a worker who is receiving medical treatment for an injury in a workplace accident or suffering from an occupational disease or information about death or the autopsy report requested with the form prescribed by the Department under section 17 of said law. The inspectors shall issue a temporary order to the employer for work stoppage partially or

No.	Laws and Regulation	Relevant Articles	Commitments
			wholly with the approval of the chief inspector and inform the relevant departments, if necessary if any occupational accident, disease, dangerous occurrence, or major accident happens or is likely to happen due to any of the following facts; Impropriety to work continuously due to unsafe workplace conditions, unsafe acts of workers, the existence of hazardous material and machinery at the workplace, or parts of machinery or laying out of machinery at the workplace and working practices; Impropriety to work continuously due to violation of or failure to comply with any provision of this Law; Assumption to be harmful to workers at the workplace due to any act of negligence and carelessness or omission by any person; The necessity to evacuate workers for safety due to the imminent danger situation of occupational injury under section 18 of said law. The project proponent has to Provide adequate and relevant personal protective equipment to workers free of charge and make them wear it during work so as not to expose workers to any serious occupational diseases or hazards Arrange and display occupational safety and health instructions, warning signs, notices, posters, and signboards The worker shall wear or use at all times any protective clothes, equipment, and tools provided by the employer for the purpose of safety and health The worker shall properly and systematically use any equipment and tools, machines, any parts of the machines, vehicles, electricity, and other substances being used at the workplace The worker shall take reasonable care for the safety and health of himself/ herself and of other persons who may be affected by his/ her acts or omissions at work
		Section 18 Sub-section (e) of section 26 Sub-section (l) of section 26 Sub-section (a) of section 30 Sub-section (d) of section 30 Sub-section (e) of section 30	
18	Labor Organization Law (2011)	Objectives Section 17, 18, 19, 20, 21, 22	To ensure the protection of the rights of the employees, having good relationships between the employees and employer and enabling them to form and carry out the labor organizations systematically and independently. The project proponent has to

No.	Laws and Regulation	Relevant Articles	Commitments
			Allow the labor organization to negotiate and settle with the employer if the workers are unable to obtain and enjoy the rights of the workers contained in the labor laws and to summit demands to the employer and claim in accordance with the relevant law if the agreement cannot be reached Allow the demand for the re-appointment of the worker who is dismissed by the employer without conformity with the labor laws Send the representatives to the Conciliation Body in settling a dispute between the employer and the worker Allow the labor organization to participate and discuss in Discussing with the government, the employer, and the complaining employees in respect of employee's rights or interests contained in the labor laws Allow the labor organization to participate in solving the collective bargains of the employees in accordance with the labor laws Allow the labor organization to carry out holding the meetings, going on strike, and other collective activities in line with the procedure, regulation, by-law, and directive of the relevant Chief Labor Organization
19	Settlement of Labor Dispute Law (2019)	Objectives Section 38, 39, 40, 51	To ensure negotiation and discussion between employees and project proponent, abiding the decision of Tribunal. The project proponent commits to- Not absent to negotiation within the stipulated time for complaint Not change the existing stipulations for employees within conducting period before tribunal Not change the existing stipulations for employees within conducting period before tribunal Pay the compensation decided by Tribunal if violates any act or any omission to damage the interest of labor by reducing of product without efficient cause
20	Employment and Skill Development Law (2013)	Objectives Section 5, 14, Sub-section (a,b) of section 30	To ensure the job security and to develop the employee's skill with the fund of project owner. The project proponent has to- Appoint employees with the contract Carry out the training programs with the policy of Skill Development Body to develop

No.	Laws and Regulation	Relevant Articles	Commitments
			the employment skill of employees who is appointed or will be appointed Monthly pay to the fund, which is fund for development of skill of employees, not less below 0.5 percentage of the total payment to the level of worker supervisor and the workers below such level Promise not to deduct from the payment of employees for above mentioned fund
21	Minimum Wedges Law (2013)	Objectives Sub-section (a, b, c, d, e, f, g) of section 13	To ensure the project owner pay the wages not less than prescribed wages and notify obviously these wages in workplace, moreover to be inspected The project proponent has to Notify the prescribed wages obviously in the workplace Correctly record the lists, schedules, documents, and wages and report these to the relevant department and give them if these are asked while inspecting, in accordance with the stipulations Allow to be inspected by the inspector Allow holiday for medical treatment if the employee's health is not fit to work Allow holidays without deducting from the wages if one of the parents or one of the family dies
22	Payment of Wages Law (2016)	Objectives Sections 3,4,5,7 to 13, 14	To ensure the way of payment and avoid delay payment to the employees. The project proponent has to Pay the wages Submit the agreements of employees & reasonable ground to the department if it is difficult to pay because of force majeure included in natural disaster Abide by the provisions of sections 7 to 13 in chapter (3) in respect of deduction from wages Pay the overtime fees, prescribed by law, to the employees who work over working hours
23	Leaves and Holidays Act (1951)	Objectives	The employees can take the leaves and get the holidays legally and to ensure the right to get the holidays and leaves. The project proponent has to allow the leaves and holidays
24	Social Security Law (2012)	Objectives	The project proponent has to create social security for the employees because the project is a business under the Myanmar Citizen Investment Law. To ensure social security for employees of the project, the project owner

No.	Laws and Regulation	Relevant Articles	Commitments
		Section 11(a), 15 (a), 18 (b), 48 (b), 75	has to register with the social security offices and to pay the prescribed fund. The project proponent has to Register to the respected Social Security office Pay the social security fund for at least four types of social security Pay the fund which has to be paid to me and together with the fund which has to be paid from their salary by the employees. Moreover, the project owner will pay the cost for the above-mentioned fund only myself Pay the fund for accidence Make corrections and submit the list and record provided in section 75 to the respected Social Security office.
25	Workmen's Compensation Act (1923)	Objectives Section 13	To ensure the compensation to injured employees while implementing in line with the above law and to pay the prescribed compensations for various kinds of injury. The project proponent has to Pay the compensation in line with the provisions of said law based on the kind of injury and case-by-case
26	Conservation of Water Resources and Rivers Law (2006)	Objectives Sub-section (a) of Section 8, Sub-section (a) of Section 11, Section 19, Sub-section (a,b) of Section 21, Section 22, Sub-section (b) of Section 24	The project proponent will avoid the disposal of stipulated materials into the river creek. The project proponent commits to Avoid any act to damage the river, any creek, and water resource Avoid disposing of the fuel, chemicals, toxic substances, other substances, and explosive substances from the bank to the river Avoid disposing of any material, which may damage or change the waterway, from the bank to the river Avoid digging the well or lake and digging the soil without permission from the Directorate Avoid putting heavy materials in the bank without permission from the Directorate Avoid the violation of conditions stipulated by the Directorate for the Prevention of Water Pollution
27	Law Amending the Conservation of Water Resources and Rivers Rules (2020)	Objectives Section 20, 21, 22	Ensure the project scope and project period are submitted to the department and permission is given before commencing the construction of the project. This law focuses as follows; If the project proponent has to build a river-crossing bridge or stream-crossing bridge

No.	Laws and Regulation	Relevant Articles	Commitments
			alongside the stream territory, river bank territory, and strand territory as a necessity, present the project scope and project period to the Ministry of Transport and request the agreement contract, in line with the section (20) of said law. After reviewing the request form in accordance with section 20 and if there is no possible impact on the conservation of water resources and rivers, the Ministry of Transport shall define the regulations and give the permission of constructing stream-crossing. bridges and river-crossing bridges, in line with section (21) of said law. If permission is given according to section 21, the project proponent has to submit the project scope and monitoring service charges to the department for the construction of the river-crossing bridges and stream-crossing bridges, in line with section (22) of said law.
28	UnderGroundwater Act (1930)		According to the Act the President of the Union may, by notification, direct and shall apply only to the tubes, exceeding a depth to be prescribed to the President of the Union and may prescribe different depths for different local areas. Accordingly, "underGroundwater" means water obtained fSrom below the surface of the ground by the sinking of tubes. It is also stated that no person shall sink a tube for the purpose of obtaining underGroundwater except under and in accordance with the terms of a license granted by the water officer, an officer by notification prescribed on his behalf.
29	Forest Law (2018)	Objectives Sub-section (a) of section 12	to ensure carrying out the project with the permission of the Ministry of Natural Resources and Environmental Conservation if the project land is forest land or forest-covered land. This law focuses as follows; The project proponent has to obtain the permission of the Ministry of Natural Resources and Environmental Conservation before starting the work if the project land is forest land or forest-covered under sub-section (a) of section 12
30	Conservation of Biodiversity and Protected Areas Law (2018)	Objectives	to ensure abiding by the prohibitions and stipulations to protect biodiversity and protected area The project proponent commits to

No.	Laws and Regulation	Relevant Articles	Commitments
		Sub-section (a) of section 35, sub-section (c) of section 35, sub-section (d) of section 35, sub-section (a) of section 39, sub-section (b) of section 39	The project proponent has to avoid entering the prohibited area located in the protected area without permission The project proponent has to avoid digging on the land or carrying out any activity in the protected area The project proponent has to avoid extracting, collecting, or destroying in any manner, any kind of wild or cultivated plant in the protected area The project proponent has to avoid polluting soil, water, and air, damaging a watercourse or poisoning water, electrification, using chemical or explosive materials in the protected area The project proponent has to avoid possessing or disposing of toxic objectives or mineral wastes in the protected area
31	Myanmar Tourism Law (2018)	Objectives	The objectives of this Law are as follows: to support Myanmar as an international tourist destination by creating domestic and international markets effectively; to protect the rights of tour operators and tourists, and to understand and comply with their obligations; to ensure the quality and safety of tourism services; to enhance coordination and cooperation for the development and management of the tourism sector; to create employment opportunities and develop human resources by enhancing the awareness of tourism; to develop responsible tourism activities that will contribute to the country's sustainable development, eco-tourism, and conservation of the natural environment; to develop local businesses, small and medium enterprises based on tourism and economic opportunities for local communities, as well as Community-Based Tourism (CBT); to coordinate and cooperate with local and international institutions and tourism experts in conducting research for tourism development.
		Section 14	The project proponent has to operate in a responsible and sustainable manner; respect Myanmar's cultural heritage, customs, and traditions, and conserve the natural environment,

No.	Laws and Regulation	Relevant Articles	Commitments
			abide by the provisions of this Law, rules, notifications, orders, and directives issued by this The project proponent commits to; To operate a hotel business or guest-house business. The project proponent has to apply for prior permission to build or renovate any building hotel or guest- house to the Regional Tourism Executive Committee in accordance with the prescribed manners unless otherwise described in any existing laws. To operate any tourism business listed below. The project proponent has to apply to the Regional Tourism Executive Committee to obtain the license in accordance with the stipulations: tour operating business; hotel business; guest-house business; tourist guide business; other tourism-related services. The project proponent has not to transfer or accept the following business license without permission under this Law: operate a tour operating business, hotel business, guest-house business or other tourism-related services without a license.
32	Myanmar Tourism Rules (2020)	Section 26 Section 27 Section 28	recommendation of the Township General Administration Department in relation to the construction or maintenance of the building; recommendation of the Ward or Village Tract Administration Office in relation to the construction or maintenance of the building; recommendation or permit of the relevant Development Committee in relation to the construction or maintenance of the building if it is within the limit of the development area; recommendation for the innocence of the relevant police station; recommendation of the relevant Township Fire Brigade Department in relation to a fire hazard; recommendation of the relevant Township Health Department in relation to the sanitation system and hygienic food preparation system; layout plan of the hotel or guest-house building to be constructed that is signed by the engineer-in-charge;

No.	Laws and Regulation	Relevant Articles	Commitments
		Section 29 Section 30 Section 31 Section 33	recommendation of the Environmental Conservation Department in relation to the environmental impact; document of the land ownership or lease contract or document of the building lease agreement; capital assets and evidence for the financial strength to operate the business; three passport-seized colour photos of the applicant taken within the last six months; recommendation of the Department of Archaeology and National Museum if the proposed premises and building are located in the archaeological zones; recommendation of the Forestry Department if the proposed premises and building are located in the forest and environmental conservation areas; recommendation of the Department of Civil Aviation if the proposed premises are located in the airport boundary. The Regional Tourism Executive Committee shall scrutinize the application under Rule 26 within 30 days from the date of receipt of the application. When scrutinizing; The prior permission for the application shall be granted if the documents are fulfilled, and conform with the stipulations; The required documents shall be requested from the applicant with reasons if the documents are not fulfilled; The prior permission for the application shall be granted if the documents are fulfilled and resubmitted, and whether they conform with the stipulations after scrutinizing the application; The application shall be rejected if it does not conform to the stipulations. The Regional Tourism Executive Committee shall notify, in writing, the decision in respect of the application under Rules 26 to the relevant applicant. The project proponent has to construct or maintain the hotel or guest house after obtaining the prior permission of the Regional Tourism Executive Committee. The Body assigned by the Regional Tourism Executive Committee shall conduct the field inspection during the construction and maintenance whether the applicant constructs or maintains the hotel or guest-

No.	Laws and Regulation	Relevant Articles	Commitments
			house building according to the prior permission. When the project proponent obtains prior permission has to submit, in writing, the completion report of construction or maintenance of the hotel or guest–house building to the Regional Tourism Executive Committee once in six months. If it is completed, the completion report shall be submitted in writing. The project proponent has to apply for a license to the relevant Regional Tourism Executive Committee with the following documents with Form 4; Copy of the prior permission; Copy of the bank statement; Recommendation of the Nay Pyi Taw Council or the Region or State Government in relation to the application for the hotel business license; Recommendation of the Township General Administration Department in relation to the application for the hotel business license Recommendation of the relevant Development Committee in relation to the application for the hotel business license if it is within the limit of the development area; Recommendation for the innocence of the relevant police station; Recommendation of the relevant Township Fire Brigade Department in relation to a fire hazard; Recommendation of the relevant Township Health Department in relation to the sanitation system and hygienic food preparation system; Recommendation of the Environmental Conservation Department in relation to the environmental impact; Recommendation of the Ward or Village Tract Administration Office in relation to the application for the hotel business licence; Document of the land ownership or lease contract or document of the building lease agreement; Photos of the building and room; Three passport – sized color photos of the applicant taken within the last six months; If it is the company or organization, the copy of the certificate of the formation of the

No.	Laws and Regulation	Relevant Articles	Commitments
			company or the copy of the registration certificate of the organization; Copy of the evidence for joint venture if it is a joint- -venture between citizen and foreigner; List of the staff (to mention name, qualification, and work experience of each staff); Recommendation of the Department of Archaeology and National Museum if the building is located in the archaeological zones; Recommendation of the Forestry Department if the building is located in the forest and environmental conservation areas.
33	Myanmar Hotel and Tourism Law (1993)	Section 3 (a) Section 3 (b)	To systematically develop and promote the hotel and tourism industry To enable tourists to observe Myanmar cultural heritage and natural scenic beauty
34	Law Amending the Myanmar Engineering Council Law (2022)	Objectives Section 34, 37	To ensure the safety of technical and engineering work in the project. This law focuses on the following; The project proponent has to appoint the employees, who obtained the registration certificate issued by the Myanmar Engineering Council, in the technical and engineering work, under section 37 of said law. The project proponent has to ensure the employees who are engineers abide by the provisions of Myanmar Engineering Council law, prohibitions included in the rules, orders, and directives issued under said law, conditions included in the registration certificate issued by the Myanmar Engineering Council, under section 34 of said law
35	Myanmar Fire Brigade Law (2015)	Objectives Sub-section (a, b) of section 25	To ensure the fire, provide the precautionary materials and apparatuses, if the fire caused in the project area to be defeated because the project is a business in which electricity and any inflammable materials such as petroleum are used. So, the project owner has to institute the specific fire service in line with the above law. The project proponent has to Institute the specific fire services Provide materials and apparatuses for fire precaution and prevention

No.	Laws and Regulation	Relevant Articles	Commitments
36	Electricity Law (2014)	Objectives Sub-section (b) of Section 10, Section 18, Sub-section (a) of Section 21, 22, Sub-section (a, b) of Section 26, Section 27, 40, 68	To ensure compliance with the conditions of permission for the production of electricity, abiding by any stipulation, implementing the best practices, and paying compensation in line with the above law. It stipulated the following obligations of the project proponent. The project proponent commits to Implement the project with the best practices to reduce the damages to the environment, health, and socio-economy, also will pay compensation for the damages and will pay the fund for environmental conservation Take the certificate of electric safety, issued by the chief-inspector, before the commencement of power generation Be liable for damages to any person or enterprise by failure to abide by the quality standards or rules, regulation, by-laws, order and directive issued Be liable for damages to any person or enterprise by negligence of project owner Comply with the permission for electric searching and generation Inform promptly to chief- inspector and head officer of the related office while occurring of accident in electricity generation Comply with the standards, rules, and procedures. Moreover, will allow the inspection by respected governmental departments and organizations if it is necessary Pay the compensation to anyone who is injured or caused to death in electric shock or fire caused by the negligence or omitting of the project owner or representative of the project owner.
37	Natural Disaster Management Law (2013)	Objectives Sub-section (a, i, iii) of Section 13, Subsection (b, d) of Section 14, Section 25, 26, 29, Sub-section (a) of section 30	To implement natural disaster management programs and to coordinate with national and international organizations in carrying out natural disaster management activities; to conserve and restore the environment affected by natural disasters and to provide health, education, social, and livelihood programs in order to bring about better living conditions for victims; The project proponent has to Perform preparatory and preventive measures for natural disaster risk reduction before the natural disaster strikes Undertake rehabilitation and reconstruction activities for improving better living

No.	Laws and Regulation	Relevant Articles	Commitments
		Punishments	standards after the natural disaster strikes and conservation of the environment that has been affected by natural disaster Carry out better improvement on early warning system of natural disaster Carry out together with the measures of natural disaster risk reduction in development plans of the State Whoever if the natural disaster causes or is likely to be caused by any negligent act without examination or by willful action which is known that a disaster is likely to strike, shall be punished with imprisonment for a term not exceeding three years and may also be liable to fine Whoever interferes, prevents, prohibits, assaults, or coerces the department, organization, or person assigned by this law to perform any natural disaster management shall, on conviction, be punished with imprisonment for a term not exceeding two years or with a fine or with both Whoever violates any prohibition contained in rules, notifications, and orders issued under this law shall, on conviction, be punished with imprisonment for a term not exceeding one year or with a fine or with both Whoever willfully fails to comply with any of the directives of the department, organization, or person assigned by this law to perform any natural disaster management shall, on conviction, be punished with imprisonment for a term not exceeding one year or with a fine or with both
38	Protection and Preservation of Cultural Heritage Regions Law (2019)	Objectives Section 13, 22	To ensure the protection of cultural heritages and the cultural heritage area from damage by natural disasters or man-made. The project proponent commits to Apply to get the prior permission of the Directorate of Ancient Research to build the road, bridge, or dam in the cultural heritage area Promise not to build a building that is not in line with the stipulations prescribed by the Ministry of Culture in the cultural heritage area.
39	Protection and Preservation of Antique Objects Law (2015)	Objectives	To ensure the protection of ancient monuments and information about it if it was in the project area. This law focuses as follows;

No.	Laws and Regulation	Relevant Articles	Commitments
		Section 12	The project proponent has to Inform the village tract or ward administrator if any antique objective is found in the project area
40	Protection and Preservation of Ancient Monuments Law (2015)	Objectives Section 12,15, Sub-section (f) of section 20	To ensure the protection of ancient monuments and information about it if it was in the project area. This law focuses as follows; The project proponent has to Report to the village tract or ward administrators if the project proponent finds any ancient monument under the ground on the ground or under the water Obtain the prior permission of the Department of Ancient Research Museum if the project area is in the prescribed area of the ancient monument Obtain the prior permission, by writing, of the Department of Ancient Research and National Museum if the project proponent disposes of the chemical and solid waste in the Ancient Monument area.
41	Myanmar Companies Law (2017)		Essential Requirements of Companies are as follows, A company registered under the Myanmar Companies Law shall have the following facts: under section 4, sub-section (a) of said law. a name; a constitution, at least one share in issue (provided that a company limited by guarantee need not have a share capital) at least one member subject to sub-section (vi), at least one director who shall be ordinarily resident in the Union; if the company is a public company, at least three directions, one of whom shall be a Myanmar citizen who is ordinarily resident in the Union; and a registered office address in the Union, under section-4, sub-section (a), sub-sections i, ii, iii, iv, v, vi, and vii of said law. Capacity and powers of companies are as follows, A company: under section-5, sub-section (a) of said law. will be a legal entity in its own right separate from its members having full rights, powers, and privileges and continuing in existence until it is removed from the register: under

No.	Laws and Regulation	Relevant Articles	Commitments
			section-5, sub-section (a), sub-section of said law. subject to this law and any other law, has both with other and outside the Union full legal capacity to carry on any business or activity, do any act, or enter into any transaction, including the power to: under section-5, sub-section (a), sub-section (ii) of said law. issue shares, debentures, or securities which convert into shares in the company; under sub-section (ii), sub-section (aa) of said law. grant options to subscribe for shares or debentures in the company: under sub-section (ii), sub-section (bb) of said law. grant a security interest over any of its property: under sub-section (ii), sub-section (cc) of said law. distribute any of the company's property among the members, in kind or otherwise, under sub-section (ii), sub-section (dd) of said law. The constitution of a company may contain a provision relating to the capacity, rights, powers, or privileges of the company only if the capacity of the company or those rights, powers, and privileges are restricted, under section 5, sub-section (b) of said law. A company may act as a holding company of another company and incorporate and hold shares in any number of subsidiaries, under section 5, sub-section (c)of said law.
42	Consumer Protection Law (2019)	Objectives Section 3 (d, f, h) Section 21	To ensure the provision of high-quality goods or services that guarantee consumer safety, health, and satisfaction. To protect consumers from unsafe goods or services and prevent losses or damages arising from their use. To take prompt actions regarding goods or services that pose risks to consumer safety. The project proponent has to - • provide clear and accurate information regarding the guarantees and specifications of goods or services. • treat consumers fairly and without discrimination. • conduct business operations with integrity and in compliance with ethical and regulatory standards. • guarantee goods or services based on quality standards prescribed by relevant

No.	Laws and Regulation	Relevant Articles	Commitments
			government departments or agencies for trading or production purposes. • provide consumers with the opportunity to test necessary goods before purchase to verify their quality. • avoid directly or indirectly selling goods or services that may cause harm or loss to consumers. • provide guarantees made regarding goods or services. If the guarantees are not met, take responsibility as promised. • refrain from intimidating, spreading misinformation, or engaging in inappropriate communication or actions against consumers during dispute resolution processes, whether through public communication channels or other means. • notify the relevant department and consumers in a timely manner using public communication channels or other methods if it becomes known, either directly or indirectly, that goods or services being produced pose safety risks. • comply with the resolutions and decisions made by the relevant committee when disputes arise concerning goods or services.

The following guidelines constitute the key components of the legal framework for environmental conservation in Myanmar:

National Environmental Quality (emission) Guidelines (NEQEG) (2015)

The Environmental Conservation Law (2012) provides the basis for the conservation and protection of the natural environment of Myanmar and provides the common principles of environmental conservation and for other environmental laws and policies. The Government established the National Environmental Quality (Emissions) Guidelines (NEQEG) in 2015 which include guidelines for air emissions, wastewater, noise levels, odor, and sector-specific requirements including those for electric power transmission projects.

National Drinking Water Quality Standards Myanmar (2019)

The National Drinking Water Quality Standards (2019) are established to protect water for designated uses such as drinking, recreation, agricultural irrigation, or protection and maintenance of aquatic life, etc. Since 1990, Environmental Sanitation Division under Department of Health has initiated to develop the National Drinking Water Quality Standard in Myanmar by the cooperation and collaboration of other water related agencies bot government and non-government organizations. The standard was formulated by Technical Committee (2) Food stuff of the Department of Standards of Myanmar Science Technology

and Research Department (MSTRD). It was approved by the Technical Committee in September 2014. The standard is based on the guideline 'Myanmar Drinking Water Quality Standards, 2019' published by the Ministry of Health of the Government of Myanmar. The standards were based on the series of WHO guidelines and other countries NDWQSs with the particular adaptation to recent problems in Myanmar.

National Surface Water Quality Standards (2024)

The National Surface Water Quality Standards (2024) provides the standards and guidelines which is necessary to be established in order to minimize the surface water pollution. The standard has been formulated since in 2015 with the technical assistance of the Ministry of Environment, Japan, through the Water Environment Partnership in Asia (WEPA), and international organizations such as, the Asia Development Bank (ADB), the Institute for Global Environmental Strategies (IGES) and the Japan International Cooperation Agency (JICA). The Government established the National Surface Water Quality Standards in 2024 which include guidelines and standard values to enable clean and safe surface water for aquatic life and human beings.

Water Quality

Table 5-3 NEQEG Effluent Limits Applicable to Tourism and Hospitality Development

Parameter	Unit	National Environmental Quality (Emission) Guideline
5-day Biochemical Oxygen Demand	mg/l	50
Chemical Oxygen Demand	mg/l	250
Oil and grease	mg/l	10
pH	S.U.a	6-9
Total coliform bacteria	100 ml	400
Total nitrogen	mg/l	10
Total phosphorus	mg/l	2
Total suspended solids	mg/l	50

Source: NEQEG Guideline (2015)

Table 5-4 Guideline Values for Drinking Water Quality

Parameter	Unit	National Drinking Water Quality Standards	WHO Drinking Water standard 2018.
Carbonate	mg/l	-	NA
Bicarbonate	mg/l	-	NA
Sulphate	mg/l	250	-
Chloride	mg/l	250	250
Color	TCU	15 TCU	15 TCU
Total Alkalinity	mg/l	-	-
Calcium Hardness	mg/l	200	NA
Iron	mg/l	1	0.3
Magnesium Hardness	mg/l	125	NA

Parameter	Unit	National Drinking Water Quality Standards	WHO Drinking Water standard 2018.
Phosphate	mg/l	-	NA
Sodium Chloride	mg/l	-	NA
Suspended Solids	mg/l	-	NA
Total Hardness	mg/l	-	500
Total Solids	mg/l	-	NA

Source: National Drinking Water Quality Standards, WHO Drinking Water Standard 2018

Air Emission Levels

Table 5-5 Guideline Values for Air Quality

Parameters	Guidelines Value	Unit	Guidelines/ Organization	Averaging Period
PM_{10}	20 50	µg/m3	NEQ	24hrs
$PM_{2.5}$	10 25	µg/m3	NEQ	24hrs
NO_2	40 200	µg/m3	NEQ	1hrs
SO_2	500	µg/m3	NEQ	24hrs
CO	4	mg/m3	NAQQS	24hrs
CO_2	5000	ppm	ACGIH	8hrs

Source: Myanmar National Environmental Quality (Emission) Guidelines, National Ambient Air Quality Standards (NAAQS), and American Conference of Governmental Industrial Hygienists (ACGIH)

Odor

Point and diffuse source odors from industries should be minimized using available prevention and control techniques as described in the IFC EHS industry-specific guidelines. Point source activities are those that involve stack emissions of odor and which generally can be controlled using waste reduction, waste minimization, cleaner production principles or conventional emission control equipment. Diffuse source activities are generally dominated by area or volume source emissions of odor (e.g. intensive agricultural activities) and which can be more difficult to control. Projects should control odors to ensure that odors that are offensive or unacceptable to neighbors do not occur. Generally, odor levels should not exceed five to ten odorant units at the edge of populated areas in the vicinity of a project. Projects with multiple odorous points or diffuse releases, or emitting complex odors should conduct an odor impact assessment to determine ground-level maximum concentrations taking into account site-specific factors including proximity to populated areas.

Noise Level

Noise prevention and mitigation measures should be taken by all projects where predicted or measured noise impacts from a project facility or operation exceed the applicable noise level guideline at the most sensitive point of reception. Noise impacts should not exceed the levels shown below, or result in a maximum increase in background levels of three decibels at the nearest receptor location off-site.

Table 5-6 Noise Standard Value of NEQEG

Receptor	One Hour LAeq (dBA)	
	Daytime (07:00 – 22:00)	Nighttime (22:00 – 07:00)
Residential, Institutional, Educational	55	45
Industrial, Commercial	70	70

Source: a Equivalent continuous sound level in decibels
NEQEG Guideline (2015)

Vibration

Vibration level standards were compared with the Standard Guidelines MOE Japan. The International Standards are described as follows:

Table 5-7 Regulatory Standards for Vibration

Type	Day Time	Night Time	Applicable Area
I	60-65 dB	55-60 dB	Areas where maintenance of quiet is particularly needed to preserve a good living environment and where quiet is needed as they are used for residential purposes
II	65-70 dB	60-65 dB	Areas used for commercial and industrial as well as

5.4 International Guidelines

Application of International and Domestic Guidelines

The ultimate IEE report will be prepared based on the Myanmar Environmental Impact Assessment Guidelines (2015) and International best practices and guidelines. Specifically, the Initial Environmental Examination for this "Novotel Yangon Max Hotel" shall be conducted following not only the National Environmental Guidelines but also International Guidelines and Practices such as WHO standards, and IFC performance indicators. The international guidelines are as follows;

1) The IFC, Environmental, Health and Safety Guidelines for Tourism and Hospitality Development, 2007
2) IFC, Environmental, Health and Safety Guidelines for Water and Sanitation, 2007
3) Guidelines of Hazardous Materials Management, 2007
4) The IFC General Environmental, Health and Safety Guidelines, 2007
5) The EHS Guidelines on Occupational, Health and Safety, 2007
6) The EHS Guidelines for Tourism and Hospitality Development, 2007

In addition, the IFC performance standard (PS) represents the policy and performance-based framework and requirements for the ESIA and sustainable social and environmental management for the project. Whereas the World Bank Group's EHS Guidelines provide guidance on general and industry best practices as well as recommended numerical limits for air emissions to the atmosphere, noise, liquid and solid wastes, hazardous waste, occupational health and safety, and other aspects of industrial facilities and other types of development project. The IFC performance standard (PS) includes:

- PS 1 Assessment and Management of Environmental and Social Risks and Impacts
- PS 2 Labor and Working Conditions
- PS 3 Resource Efficiency and Pollution Prevention
- PS 4 Community Health, Safety and Security
- PS 5 Land Acquisition and Involuntary Resettlement
- PS 6 Biodiversity Conservation and Sustainable Management of Natural Resources
- PS 7 Indigenous Peoples
- PS 8 Cultural Heritage

According to information presented in the IFC Environmental and Social Review Summary (ESRS), for the investment in Novotel Yangon Max Hotel project issues related to *PS5:* Land Acquisition and Involuntary Resettlement, *PS6:* Biodiversity Conservation and Sustainable Natural Resources Management, and *PS7:* Indigenous Peoples are not expected for the following reasons:

- The project is located in an urban area where land acquisition and involuntary resettlement are not anticipated. No individuals or communities are expected to be displaced as a result of the project.
- The project area is not situated in a region of significant biodiversity or natural resources. There are no protected ecosystems, forests, or critical habitats within the project's scope,
- During IFC appraisal, IFC obtained copies of all land lease agreements in Myanmar, which were all valid.
- There was no presence of Indigenous Peoples within the areas.

As such in the current Study, it is expected that there will be no potentially significant issues related to PS5, PS6, and PS7. However, if such issues arise for the proposed project, these will be addressed as appropriate by the Novotel Yangon Max Hotel in the appropriate manner.

5.5 List of Commitments followed by Project Proponent

Novotel Yangon Max Hotel, firmly resolve to implement the environmental mitigation measures specified in the environmental management plan and related documents. E Guard Environmental Services, as an independent third party, has ensured that the environmental impact assessment report is accurate and thorough, identifying impacts and proposing mitigation steps as required by applicable regulations.

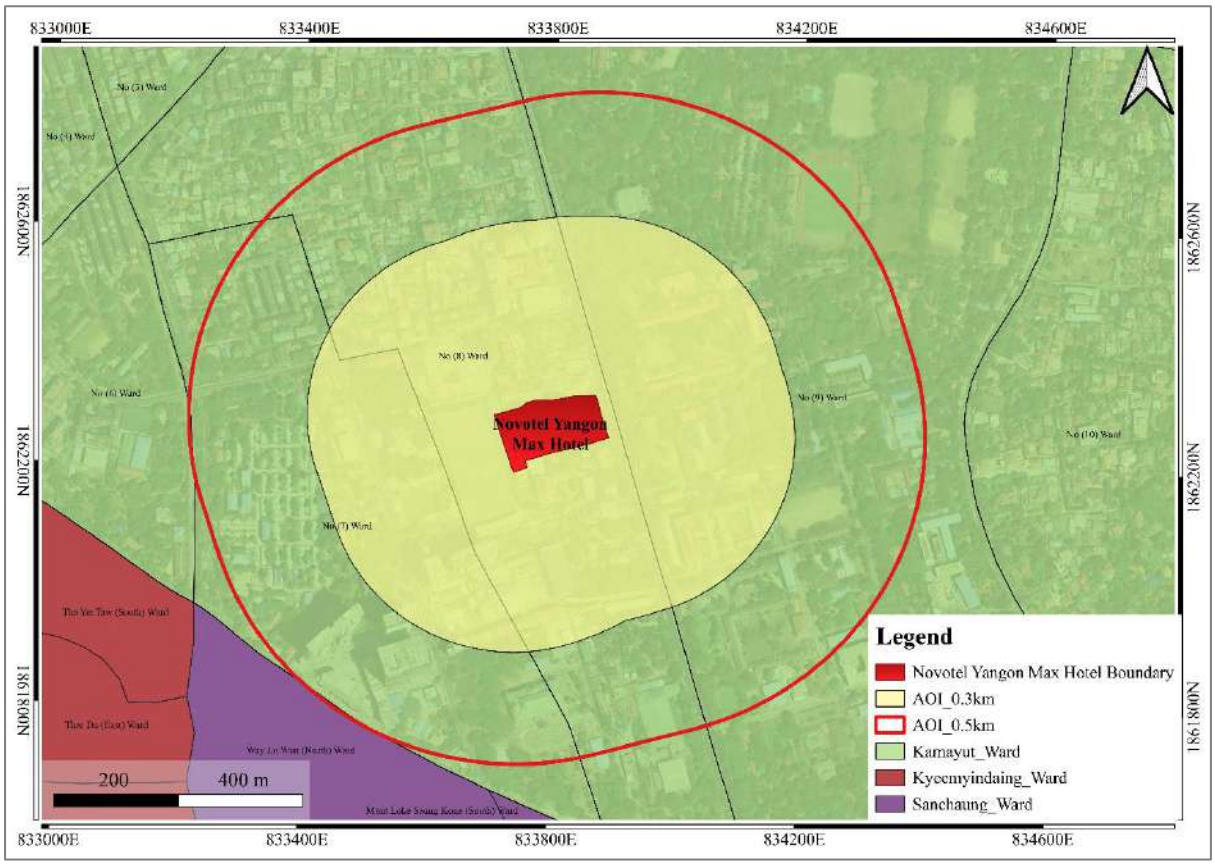
Table 5-8 List of Commitments

Particulars	Heading Number	Description of Commitment	Chapter Number
Project Description	2	The project proponent strongly commits that the information and data about the project and the operation process were accurate and correct.	2
Identification of the Project Proponent	3	The project proponent strongly commits that the information about the proponent	3
Identification of the Initial Environmental Assessment (IEE) Experts	4	The project proponent strongly commits that the information about the environmental and social study team for the IEE report preparation was correctly described.	4
Overview of Policy, legal and institutional framework	5	The project proponent strongly commits to follow the related laws, rules, regulations, standards, and guideline which was described in the IEE report.	5
Description of the Surrounding Environment and Social Conditions	6	The project proponent strongly commits not to disturb the Existing Environment Conditions expressed in the chapter.	6
	6.2	The project proponent strongly commits that Air Quality, Water Quality, Noise, and Odor were measured with the proper devices and compared the results with the National Environmental (Emission) Guideline, National Drinking Water Quality Standards, and international guidelines.	6
Identification and Assessment of Potential Environmental Impacts	7	The project proponent strongly commits to reduce the impacts of the project by following the mitigation measures that described in Chapter 9.	7
Results of the Public Consultation Meeting	8	The project proponent commits that the time, date, list of attendants, place and subject of discussion were correct.	8
Description of Proposed Mitigation Measures	9.1	The project proponent specifically commits to follow the mitigation measures during the operation phase.	9
	9.2	The project proponent specifically commits to follow the mitigation measures during decommissioning phase.	9
Institutional Requirements and Environmental Management Plan	10.1.3	The project proponent commits to certainly implement responsibilities.	10
	10.2	The project proponent commits to certainly follow the Environmental Management Plan.	10
	10.3.1	The compliance monitoring report will be reported twice a year along with the environmental monitoring plan for the operation phase and decommissioning phase.	10
	10.4	The project proponent commits to certainly follow and implement the Waste Management Plan.	10
	10.5	The project proponent commits to certainly follow and implement the Occupational Health and Safety Plan.	10
	10.6	The project proponent commits to certainly follow and implement the Emergency Preparedness and Response Plan	10
	10.7	The project proponent commits to certainly follow and implement the Corporate Social Responsibility (CSR)	10
	10.8	The project proponent commits to certainly follow and implement the Grievance Redress Mechanism (GRM).	10

CHAPTER 6 DESCRIPTION OF THE SURROUNDING ENVIRONMENTAL AND SOCIAL CONDITIONS

6.1 Setting the Study Area Limits

The Area of Influence (AOI) for an Initial Environmental Examination (IEE) report concerning the Novotel Yangon Max Hotel Project identifies the geographic region potentially impacted by the hotel's operation, either directly or indirectly. Additionally, considerations for the decommissioning phase will be included to address any potential future impacts. The AOI is determined by considering physical, biological, social, and ecological factors relevant to the type and extent of impacts. Identifying the AOI ensures that all areas with significant potential impacts are evaluated, and appropriate mitigation measures are implemented. The study area will include a 0.5 km radius around the hotel to access air, soil, and water quality, noise and vibration levels, waste management, and local socioeconomic conditions. Within this area, no sensitive zone, forests, or wetland exists.



Source: E Guard Study Team

Figure 6-1 Area of Interest of the Project

6.2 Physical Environment

6.2.1 Description of the Existing Surrounding Environment

The Novotel Yangon Max Hotel is situated in the Ward (8), Kamayut Township, Pyay Road, with easy access from several surrounding streets. The main entrance is on Pyay Road, with Nar Nat Taw Street to the north. To the west, across Nar Nat Taw Street, there is one connecting street runs along the side of the hotel and leads to its backyard, providing, an alternative point of access.

The area surrounding the Hotel includes various establishments such as a Chinese language class, Chinese vegetarian restaurant, a broadband showroom, a car dealer showroom, a health and beauty center, Mitayya Chinese Temple, a coffee shop and a Myanmar Flight Attendant School. The University of Medicine (1), Yangon University Hostels are also nearby, with the Nar Nat Taw Apartments located further away. The west of the hotel is the Yun Long Golf Club. Additionally, there are three construction sites within the study area. The first two sites are located to the north of the hotel, while the second is on the Nar Nat Taw Street, close to the Nar Nat Taw Apartments.

Source: E Guard Study Team

Figure 6-2 Overview Map of the Novotel Yangon Max Hotel

6.2.2 Environmental Components

METHODOLOGY

The objective of baseline data collection is to establish the meaningful and relevant information of the environment as primary data collection. The methodology had been designed to know the nature and degree of pollution from various sources in the environment. Baseline environmental parameters were defined according to the guideline which applies to projects. All necessary criteria such as site selections for sampling and analysis of ambient air quality, water quality and noise level of the project site were identified by environmental specialists of E Guard.

Ambient Air Quality

The emissions of dust particles and gases were measured for 24 hours continuously at the selected sites using the Environmental Perimeter Air Station (EPAS). The results were compared with the National Environmental Quality (Emission) Guidelines (NEQEG), the American Conference of Governmental Industrial Hygienists (ACGIH), and the World Health Organization (WHO) standards. EPAS provides direct readings in real-time with data-logging capabilities. Air quality is composed of dust and gas emissions of the ambient air.

Table 6-1 Ambient Air Quality Measurement

Ambient Air Quality (1 Location)	
Gas Emission	CO, CO_2, NO_2, SO_2
Dust Emission	PM_{10}, $PM_{2.5}$

Ambient Noise

Noise level LAeq (dBA) will be measured at the selected locations that can reflect the exposure of the nearest local community and sensitive locations. Duration and frequency were measured for 24 hours continuously at the selected site using the Digital Sound Level Meter.

Data analysis and interpretation were carried out in accordance with the instrument's manufacture and National Environmental Quality (Emission) Guidelines (NEQEG), World Health Organization (WHO), and International Finance Corporation (IFC) guidelines in order to be in line with Environmental Conservation Department, Ministry of Natural Resources and Environment Conservation (MONREC). "National Environmental Quality (Emission) Guidelines" for Myanmar also presented the value of noise level as LAeq (dBA).

Table 6-2 Noise Level Monitoring

Noise Monitoring (1 Location)	
Noise Emission	LAeq (dBA) (1hr, 24hrs)

Equipment used to measure ambient air, weather, noise, and vibration measurements are shown in the table below.

Table 6-3 Equipment used to measure Ambient Air, Vibration, Weather, and Noise measurements

Davis Vantage Pro2 Wireless Weather Station Provides detailed current weather conditions and expanded forecasts - all at a glance! The Vantage Pro2 uses a frequency-hopping spread spectrum radio from 902 MHz to 928 MHz to transmit and receive data up to 1,000' (300m) line of sight. In addition, the weather station features a bubble level, improved anemometer base, redesigned wind cups, and factory-calibrated wind direction. The integrated sensor suite combines temperature and humidity sensors, rain collector with an aluminum-plated tipping bucket, and an anemometer into one package for easy setup. Measure inside and outside temperature and humidity, heat index, barometric pressure, dew point, rainfall, wind direction and speed, and wind chill.	
Haz-Scanner EPAS PM_{10}, $PM_{2.5}$, NO_2, SO_2, CO, CO_2, Temperature, and Relative Humidity	
Digital Sound Level Meter Noise	
Vibration Level Meter Vibration	

Water Quality

Water samples were collected on-site using appropriate sampling equipment and procedures. Physical parameters such as salinity, pH, and Temperature turbidity of surface water was measured on-site by a portable multi-parameter water quality meter. The sampling team has pre-arranged with the labs in Yangon for analysis and logistic arrangements made to reach the preserved samples with unique IDs to the designated labs within 48hrs.

The sampling and survey team has a list of local laboratories providing analytical services for surface water quality analysis. Up to that date, there is no laboratory having accredited certification for water quality testing (environmental analysis) in Myanmar. Water Quality Laboratory (Forest Research Institute, Yezin), and Pro Lab (Myanmar). Laboratories have been

used for water quality analysis among the list of laboratories. These laboratories have been recognized as long-term establishments in Myanmar and employ qualified technical staff.

The following laboratories were used for the analysis of water and parameters shown in the table below.

1. Water Quality Laboratory, Forest Research Institute, Yezin, Nay Pyi Taw. Tel: 09 430 19169, 09 420 705131
2. Pro Lab, No-(9), Sabae Housing, Pyi Htaung Su Road, (26) Ward, South Dagon Tsp, Yangon, Myanmar. Tel: 893 767 424

Table 6-4 Environmental Quality Parameters for Water Quality

Water Quality Parameter	
Effluent Water	pH, Temperature, Total Suspended Solids, Total Phosphorus, Total Nitrogen, BOD, COD, Oil and Grease, Total Coliform
Groundwater	Carbonate, Bicarbonate, Sulphate, Chloride, Color, Total Alkalinity, Calcium Hardness, Iron, Magnesium Hardness, Phosphate, Sodium Chloride, Total Hardness, Total Solids

Water samplings are conducted using the following equipment as shown in the figure below.

Water Sampling Bottle

Horiba U-50

Figure 6-3 Equipment for Water Sampling and water

Environmental Quality Measuring and Sampling Locations

Sampling locations were confirmed by the environmental specialist on-site before doing the sampling. Water quality sampling (2) locations consist of Groundwater (GWQ: Inside the Project Site) and Effluent Water (EWQ: Inside the Project Site). Air quality was monitored at the location (AQ: Inside the Project Site that can get results of the existing ambient air quality. Noise Level was monitored at the 1 location.

Figure 6-4 Air Quality Monitoring Location of Novotel Yangon Max Hotel Project

Figure 6-5 Noise and Vibration Level Measuring Location of Novotel Yangon Max Hotel Project

Figure 6-6 Water Quality Measuring Locations of Novotel Yangon Max Hotel Project

Table 6-5 Locations of Environmental Quality sampling points

No.	Points	Coordinate	Locations
Ambient Air Quality, Noise, Vibration and Odor Monitoring Locations			
1.	Air Quality	Lat-16°49'11.49"N Long- 96° 7'51.46"E	In the Project Site
2.	Noise and Vibration	Lat-16°49'11.49"N Long-96° 7'51.46"E	In the Project Site
3.	Odor	Lat-16°49'10.50"N Long-96° 7'53.78"E	In the Project Site
Water Quality Measuring and Sampling Locations			
1.	Waste Water	Lat-16°49'13.26"N Long-96° 7'50.23"E	In the Project Site
2.	Groundwater	Lat-16°49'12.24"N Long-96° 7'52.79"E	In the Project Site

6.2.2.1 Ambient Air Quality

The air quality monitoring was done at selected locations during 2nd to 3rd October 2024. During this survey, these parameters were measured with adequate devices named Environmental Perimeter Air Station (EPAS) viz; Particulate Matters (PM_{10} and $PM_{2.5}$), gases, NO_2, SO_2, via 24-hour basis. The results and guidelines for all emission pollutants are shown in table.

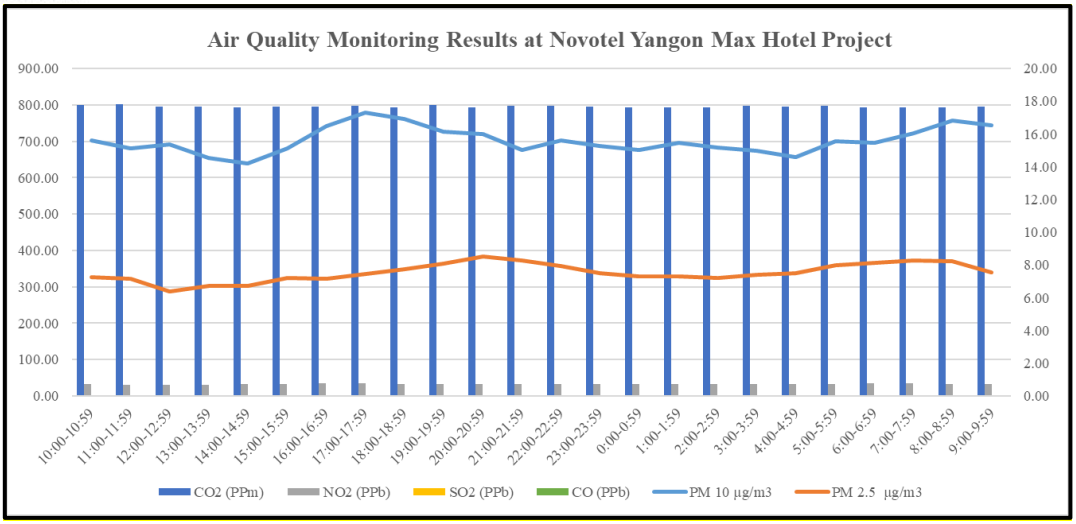


Figure 6-7 Air Quality Monitoring Results at Project Site

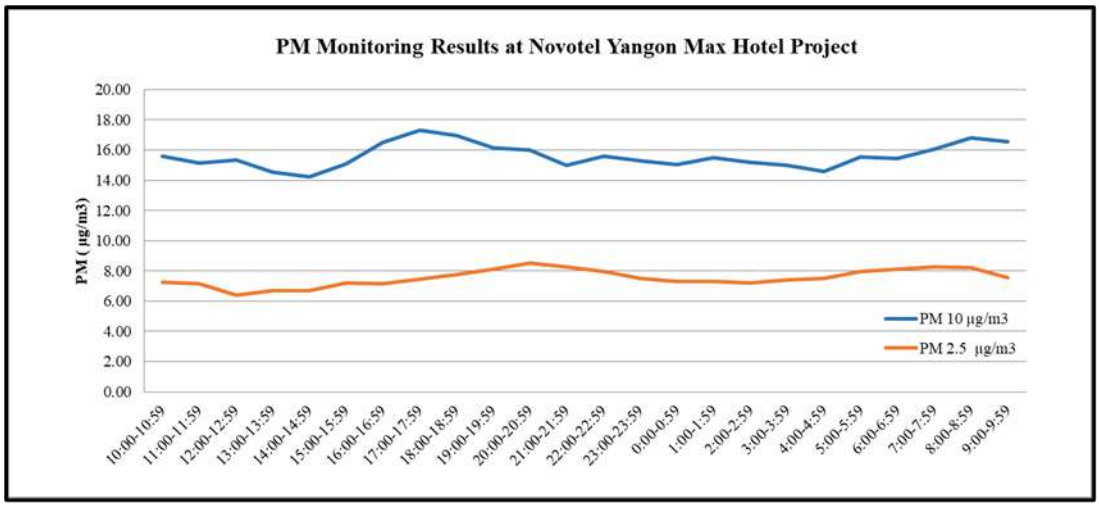


Figure 6-8 Particulate Matter (PM_{10}, $PM_{2.5}$) Monitoring Results at Project Site

Particulate matters (PM_{10} and $PM_{2.5}$) results are within guideline values as shown in the table. Atmospheric particulate matters such as PM^{10} and $PM^{2.5}$ have the ability to reach the deepest part of the lungs and so affect the respiratory process. In this air quality survey of the project site, the surveyed results of these particulate matters were gathered from EPAS. The results with one-hour intervals are shown in the following table.

Sulfur Dioxide (SO_2) is generated from the combustion of fuels such as oil and coal and as a by-product of some chemical production or wastewater treatment processes. On-road and off-road vehicles are also emission sources of SO_2. It irritates the respiratory tract, injures lung tissues, and reduces visibility and level of sunlight. The emission can be controlled by implementation of manufacturer recommended engine maintenance programs, good driving practices, installing and maintaining emissions control devices, and implementing a regular vehicle maintenance and repair program.

Nitrogen Oxides (NO_2) in the ambient air consist of nitric oxide (NO), nitrogen dioxide (NO_2) and nitrous oxide (N_2O). NO_2 is formed by chemical reaction of NO and ozone. The main sources of NO_2 are combustion of fuel and on-road and off-road vehicles. NO_2 decreases lung function and resistance to infection. The gas emission can be monitored by combustion

modification, flue gas recirculation, water/ steam injection and the same measures for SO_2 reduction.

Likewise, Carbon Monoxide (CO) and Carbon dioxide (CO_2) have the same emission sources and mitigation measures for SO_2 and NO_2. They are poisonous gas and cause damage to the respiratory organs. ACGIH Guidelines 2013, adopted threshold limit values of CO_2 is 5,000 ppm for an 8-hour, time-weighted average. Thus, it can be concluded that the existing CO_2 level is acceptable for human health.

Detail results and diel variation patterns with one-hour intervals of pollutants are shown in tables and figures below. Results of the average, 1 hour maximum, and 1 hour minimum of a day are calculated in the table.

Table 6-6 Air pollutants emission results at Project Site

Date	Time	Average	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	CO_2 (PPm)	CO (mg/m^3)
02.10.2024	10:00-10:59	Average	15.59	7.28	59.31	0.00	799.71	0.00003
02.10.2024	11:00-11:59	Average	15.13	7.16	58.96	0.00	802.75	0.00001
02.10.2024	12:00-12:59	Average	15.36	6.38	57.72	0.00	796.41	0
02.10.2024	13:00-13:59	Average	14.52	6.71	58.00	1.49	795.83	0
02.10.2024	14:00-14:59	Average	14.21	6.72	59.54	0.52	792.94	0.00001
02.10.2024	15:00-15:59	Average	15.11	7.19	62.04	0.00	794.74	0
02.10.2024	16:00-16:59	Average	16.48	7.15	64.48	0.00	796.03	0.00002
02.10.2024	17:00-17:59	Average	17.29	7.46	64.65	0.00	797.69	0.00009
02.10.2024	18:00-18:59	Average	16.94	7.75	63.36	0.81	792.53	0
02.10.2024	19:00-19:59	Average	16.13	8.11	61.16	0.00	798.84	0
02.10.2024	20:00-20:59	Average	16.02	8.54	59.43	0.00	793.03	0
02.10.2024	21:00-21:59	Average	15.00	8.29	59.78	0.00	798.29	0
02.10.2024	22:00-22:59	Average	15.59	7.95	60.71	0.00	797.66	0
02.10.2024	23:00-23:59	Average	15.27	7.51	59.65	0.00	796.05	0.00003
03.10.2024	0:00-0:59	Average	15.04	7.29	59.78	0.00	793.57	0
03.10.2024	1:00-1:59	Average	15.48	7.32	60.31	0.00	792.19	0
03.10.2024	2:00-2:59	Average	15.19	7.23	60.35	0.68	794.13	0
03.10.2024	3:00-3:59	Average	14.98	7.39	60.24	0.00	798.18	0.00002
03.10.2024	4:00-4:59	Average	14.57	7.52	60.89	0.00	795.48	0
03.10.2024	5:00-5:59	Average	15.57	7.97	63.36	0.68	798.37	0
03.10.2024	6:00-6:59	Average	15.45	8.11	64.97	0.68	793.04	0.00009
03.10.2024	7:00-7:59	Average	16.05	8.25	65.07	0.31	794.21	0.00006
03.10.2024	8:00-8:59	Average	16.80	8.23	62.02	0.00	792.79	0
03.10.2024	9:00-9:59	Average	16.55	7.56	61.40	1.36	794.47	0
Average			15.60	7.54	61.14	0.26	795.79	0.00002
1 hour Minimum			14.21	6.38	57.72	0.00	792.19	0
1 hour Maximum			17.29	8.54	65.07	1.49	802.75	0.00009

All parameters measured are within the National Environmental Quality (Emission) Guideline (NEQG), World Health Organization (WHO), and American Conference of Governmental

Industrial Hygienists (ACGIH) guidelines. The following table described the results comparison.

Table 6-7 Compared Ambient Air Quality Results from Selected Points

No.	Parameter	Result	Unit	Guideline	Guideline Value	Average Period
1.	PM_{10}	17.29	$\mu g/m^3$	NEQEG	20 50	1-year 24-hour
2.	$PM_{2.5}$	8.54	$\mu g/m^3$	NEQEG	10 25	1-year 24-hour
3.	NO_2	34.61	$\mu g/m^3$	NEQEG	200	1 hr
4.	SO_2	0.57	$\mu g/m^3$	NEQEG	20	24-hour
5	CO	0.00002	mg/m^3	WHO	4	24-hour
6	CO_2	802.75	ppm	ACGIH	500	8 hours

Source: Myanmar National Environmental Quality (Emission) Guidelines, World Health Organization (WHO), and American Conference of Governmental Industrial Hygienists (ACGIH).

6.2.2.2 Wind Speed and Direction

The following figures describe the wind speed and wind directions of the proposed project site. Novotel Yangon Max Hotel Project from 2nd to 3rd October 2024. The wind direction is the following Figure. According to the observed data, the wind blows from the direction of North East with the highest speed of 2 m/s from the Novotel Yangon Max Hotel project.

Figure 6-9 Wind Speed and Wind Direction (Blowing From) at Novotel Yangon Max Hotel Project

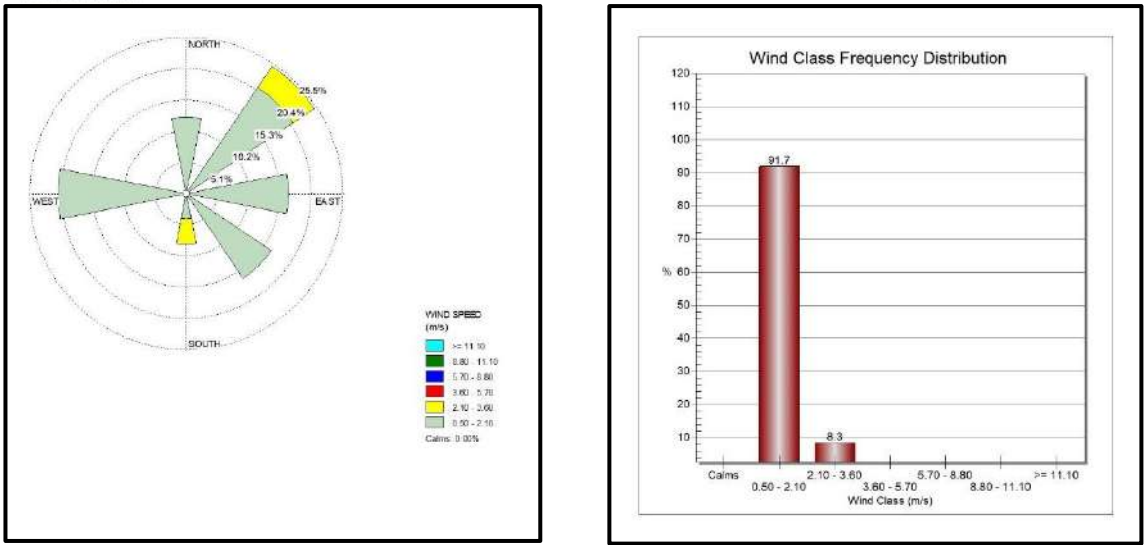


Figure 6-10 Wind Class Frequency Distribution (Blowing From) at Novotel Yangon Max Hotel Project

6.2.2.3 Ambient Noise

The ambient noise level for the proposed project was measured with a Digital Sound Level Meter at the Project site. The noise level measurement was conducted at Novotel Yangon Max Hotel project points from 2nd to 3rd October 2024. The measuring period is 24 hours continuously. The observed values are described in the following table and the following figures are noise level measurements at the proposed project.

Table 6-8Observed Values of Noise Level Measurement at Project Site

No.	Date	Time	Observed Mean Value (Source)	Weight	Day/Night	Average
1	03.10.2024	7:00-7:59	85.70	A	Day	74.46
2	03.10.2024	8:00-8:59	86.18	A	Day	
3	03.10.2024	9:00-9:59	88.98	A	Day	
4	02.10.2024	10:00-10:59	71.87	A	Day	
5	02.10.2024	11:00-11:59	68.29	A	Day	
6	02.10.2024	12:00-12:59	66.24	A	Day	
7	02.10.2024	13:00-13:59	86.70	A	Day	
8	02.10.2024	14:00-14:59:	77.30	A	Day	
9	02.10.2024	15:00-15:59	72.01	A	Day	
10	02.10.2024	16:00-16:59	72.26	A	Day	
11	02.10.2024	17:00-17:59	70.26	A	Day	
12	02.10.2024	18:00-18:59	68.10	A	Day	
13	02.10.2024	19:00-19:59	68.46	A	Day	
14	02.10.2024	20:00-20:59	67.28	A	Day	
15	02.10.2024	21:00-21:59	67.27	A	Day	
16	02.10.2024	22:00-22:59	68.20	A	Night	73.13

No.	Date	Time	Observed Mean Value (Source)	Weight	Day/Night	Average
17	02.10.2024	23:00-23:59	64.97	A	Night	
18	03.10.2024	0:00-0:59	76.57	A	Night	
19	03.10.2024	1:00-1:59	65.27	A	Night	
20	03.10.2024	2:00-2:59	69.54	A	Night	
21	03.10.2024	3:00-3:59	68.17	A	Night	
22	03.10.2024	4:00-4:59	82.85	A	Night	
23	03.10.2024	5:00-5:59	80.11	A	Night	
24	03.10.2024	6:00-6:59	82.45	A	Night	
Average of Day & Night			**67.69**			

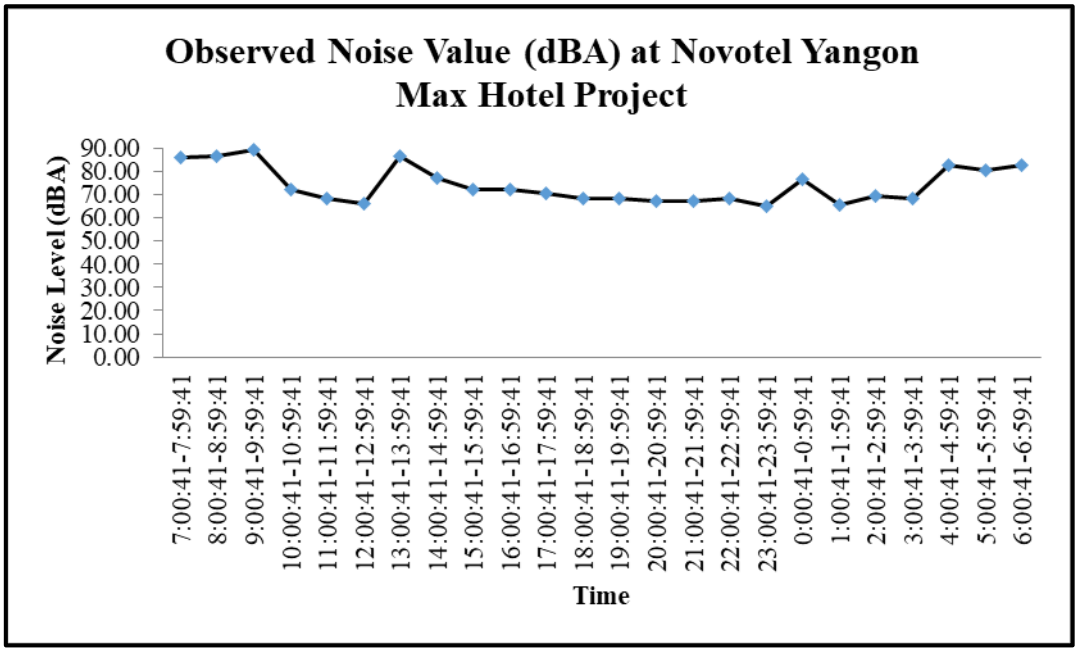


Figure 6-11 Noise Level at Novotel Yangon Max Hotel Project

According to the measurements, the noise measurements exceeded the permissible limit because the generators were operating during the measurement process. Furthermore, the hotel is situated adjacent to main road with continuous traffic, communities' activities, and construction works, not only during rush hours but throughout the day. Consequently, it slightly exceeds the prescribed noise level standards.

Table 6-9 Observed Ambient Noise Level Results from Selected Point

Point	Novotel Yangon Max Hotel Project	
	Day Time	Night Time
Project Site	76.46	73.13

The observed values are compared with the National Environmental Quality (Emission) Guidelines as shown in Table 6-8 except for the receptor point, which indicates the separate level for residential and industrial points.

Table 6-10 National Environmental Quality (Emission) Guidelines Values for Noise Level

Receptor	One Hour LAeq (dBA)	
	Daytime 07:00 - 22:00 (10:00 - 22:00 for Public Holidays)	Nighttime 22:00 - 07:00 (22:00 - 10:00 for Public Holidays)
Residential, institutional, educational	55	45
Industrial, Commercial	70	70

Source: National Environmental Quality (Emission) Guidelines Values (NEQEG)

6.2.2.4 Vibration

The vibration level for the project was measured with a VM-55 Vibration Meter at the project site. The vibration level measurements were conducted at the points of Novotel Yangon Max Hotel Project, which are near the air monitoring points, from the 2nd to 3rd October 2024. The measuring period is 24 hours continuously. The observed values are described in the following Table and the values are within the standard guideline in Japan.

Table 6-11 Vibration Monitoring Results

Location	X-Lveq		Y-Lveq		Z-Lveq	
	Daytime (7:00-22:00)	Night Time (22:00-7:00)	Daytime (7:00-22:00)	Night Time (22:00-7:00)	Daytime (7:00-22:00)	Night Time (22:00-7:00)
Point	49.17	41.56	34.10	33.19	42.09	39.59

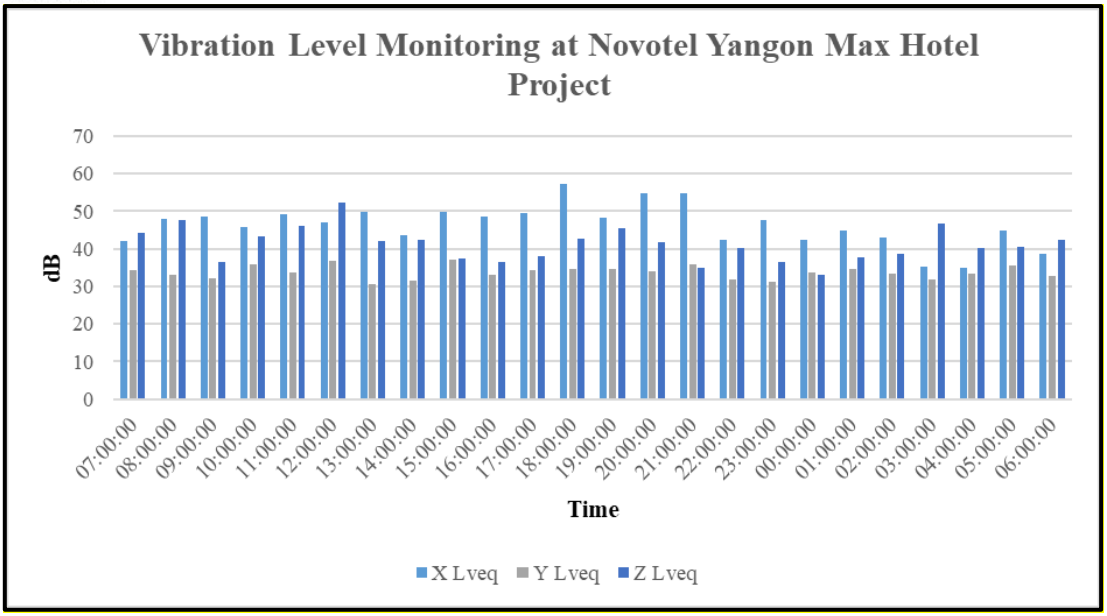


Figure 6-12 Vibration Level Monitoring at Novotel Yangon Max Hotel Project

Table 6-12 Regulatory Standards for Vibration Emitted from Specified Factories (Summary)

Time Area	Day Time	Night Time	Applicable Areas
I	60-65 dB	55-60 dB	Areas where maintenance of quiet is particularly needed to preserve a good living environment and where quiet is needed as they are used for residential purposes.
II	65-70 dB	60-65 dB	Areas used for commercial and industrial as well as residential purposes where there is a need to preserve the living environment of local residents and areas mainly serving industrial purposes are in need of measures to prevent the living environment of local residents from deteriorating.

6.2.2.5 Odor Measurement

Odor measurements were taken near air monitoring locations from 2nd to 3rd October 2024. The odor measurement results were compared to the National Environmental Quality (Emission) Guidelines. that state as follows for the odor measurement process.

Point and diffuse source odors from industries should be minimized using available prevention and control techniques as described in the IFC EHS industry-specific guidelines. Point source activities are those that involve stack emissions of odor and which generally can be controlled using waste reduction, waste minimization, cleaner production principles, or conventional emission control equipment. Diffuse source activities are generally dominated by area or volume source emissions of odor (e.g. intensive agricultural activities) and which can be more difficult to control. Projects should control odors to ensure that odors that are offensive or unacceptable to neighbors do not occur. Generally, odor levels should not exceed 5 to 10 odorant units at the edge of populated areas in the vicinity of a project. Projects with multiple odorous points diffuse releases, or emitting complex odors should conduct an odor impact

assessment to determine ground-level maximum concentrations taking into account site-specific factors including proximity to populated areas.

Table 6-13 Odor Measurement Results from the Project Site

Odor Measurement			
No.	**GPS locations**	**Observed Value**	**NEQ(E)G Guidelines Value**
1.	Lat 16°49'10.50"N Long 96° 7'53.78"E	0	5-10

Source: National Environmental Quality (Emission) Guidelines Values (NEQEG)

Figure 6-13 Odor Measuring at Novotel Yangon Max Hotel Project

6.2.2.6 Water quality

The project proponent is responsible for ensuring the drainage or runoff from the project or its related activities do not deteriorate the existing wastewater and groundwater quality before the project implementation. The baseline quality of the wastewater quality was recorded by on-site sampling and laboratory analysis at selected locations systematically. The field surveys for environmental quality monitoring and sampling were done on 2nd October 2024.

The objectives of the sampling and analysis of groundwater quality are to understand the existing water quality at the selected locations and to monitor the impacts during the operation period.

Table 6-14 Results of On-Site Groundwater Quality Measurement

Location	Temp	pH	Electrical Conductivity			DO (mg/l)	Turbidity (NTU)	Oxidation Reduction Potential (ORP)	Depth (ft)
			EC (ms/cm)	TDS (g/l)	Salinity (ppt)				
Groundwater	28.22	6.41	0.154	0.100	0.1	9.74	0.0	319	-

Table 6-15 Effluent Water Quality of Novotel Yangon Max Hotel Project

Item	Unit	Effluent Water Result	National Environmental Quality (Emission) Guideline
Biological Oxygen Demand (BOD)	mg/l	1.61	50
Chemical Oxygen Demand (COD)	mg/l	36	250
pH	S.U.a	6.56	6-9
Total Nitrogen	mg/l	1.12	10
Total Phosphorous	mg/l	0.16738	2
Total Suspended Solids	mg/l	55	50
Oil and grease	mg/l	38	10
Total Coliform Bacteria	MPN/100ml	<0.3	400

Table 6-16 Groundwater Quality of Novotel Yangon Max Hotel Project

Parameters	Unit	Groundwater Result	National Drinking Water Quality Standards	WHO Drinking Water standard 2018.
Carbonate	mg/l	ND	-	NA
Bicarbonate	mg/l	85.40	-	NA
Sulphate	mg/l	6.60	250	-
Chloride	mg/l	24.36	250	250
Color	mg pt/l	ND	15 TCU	15 TCU
Total Alkalinity	mg/l	0.632	-	-
Calcium Hardness	mg/l	10.00	200	NA
Iron	mg/l	0.48	1	0.3
Magnesium Hardness	mg/l	54.00	125	NA
Phosphate	mg/l	0.03	-	NA
Sodium Chloride	mg/l	47.79	-	NA
Suspended Solids	mg/l	3	-	NA
Total Hardness	mg/l	64.00	-	500
Total Solids	mg/l	106	-	NA

The results of wastewater do not contribute significantly to nearby water bodies. For effluent water, the Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), pH, total nitrogen, phosphorus, and total coliform bacteria levels are all well within the National Environmental Quality guidelines. However, Total Suspended Solids (TSS) slightly exceed the guideline, and Oil and Grease levels are significantly higher than acceptable limits, indicating

a need for better treatment of wastewater. For groundwater, the quality is generally good and key parameters are within safe limits.

The levels of TSS and Oil and Grease at the storm water drainage point are likely contributed by surface runoff from vehicles and parking areas, and washed off surface activities within the hotel compound, discharges from kitchen operations including improper disposal of fats and oils, cleaning activities using chemical agents, and potential contamination from existing pollutants along the drainage channel.

High levels of the TSS can impact on both environmental and human health. Solid particles can include toxic compounds. It can increase water temperature, and decrease DO level of water and reduce the penetration of sunlight needed for photosynthesis in aquatic plants. Oil and Grease can impact on balance of ecosystem. TSS can blockage in pipes and pumps, and Oil and Grease can also slow down the treatment process, leading to higher operational costs.

The proponent should install and maintain properly designed grease traps and oil water separators which can effectively remove those from kitchen, regular monitoring. In the kitchens, staff should be trained best practices to minimize the use of oils, fats, and grease that end up in the wastewater. Regular monitoring of wastewater quality should be implemented and compliance with the guidelines and regulations for TSS and Oil and Grease levels and other effluent levels. By implementing these facts can decrease bacteria, raise oxygen level, increase water quality, and reduce risk of contamination into the water and human health.

Air, Noise, and Vibration Measurement at Novotel Yangon Max Hotel Project

Groundwater Quality Onsite Measurement

Groundwater Quality Sample Taking Photo

Wastewater (Effluent) Quality Sample Taking Photo

Odor Measurement

Figure 6-14 Environmental Quality Measurement at Novotel Yangon Max Hotel Project

6.2.3 Climate and Meteorology

6.2.3.1Rainfall and Relative Humidity

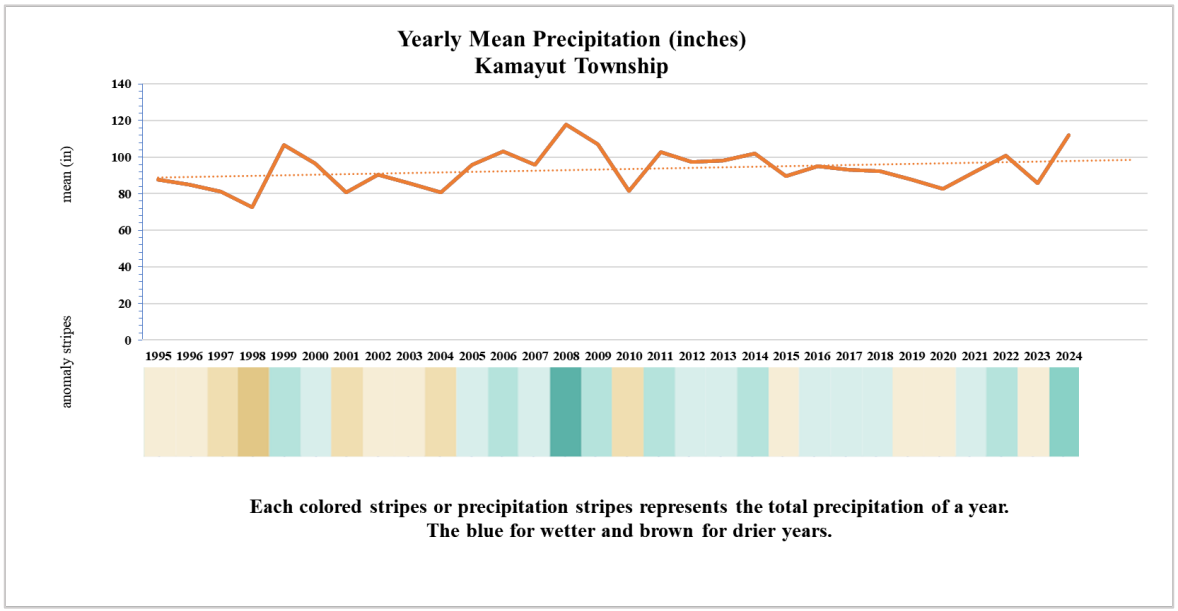
In Yangon, the wet season is oppressive and overcast, the dry season is muggy and partly cloudy, and it is hot year-round. The weather condition of Kamayut Township is sultry and wet with the highest temperature of 43°C and the lowest is 16.5°C. The annual rainfall and temperature are described in the following table.

Table 6-17Rainfall Data in Kamayut Township

No.	Year	Rainfall Data		Temperature	
		Rainy Days	Total Rainfall (inches)	Hot Season (°C)	Wet Season (°C)
1	2020	124	120.3	43	13.2
2	2021	90	103.3	41	13.2
3	2022	45	52.1	41	13.2
4	2023	50	55.1	41	13.2

Source: Kamayut Township Information (GAD, 2023)

Precipitation: The graph describes the mean annual precipitation in Kamayut Township, measured in inches. The color stripes below the graph indicate precipitation patterns, with blue indicating wet years and brown indicating dry years. From the data, it is clear that the year 2008 had the highest precipitation rate, making it the wettest year in the observed period. In contrast, 1998 had the lowest precipitation, making it the driest year. These conclusions are based on a comprehensive dataset of annual mean precipitation values.



Source: meteoblue.com

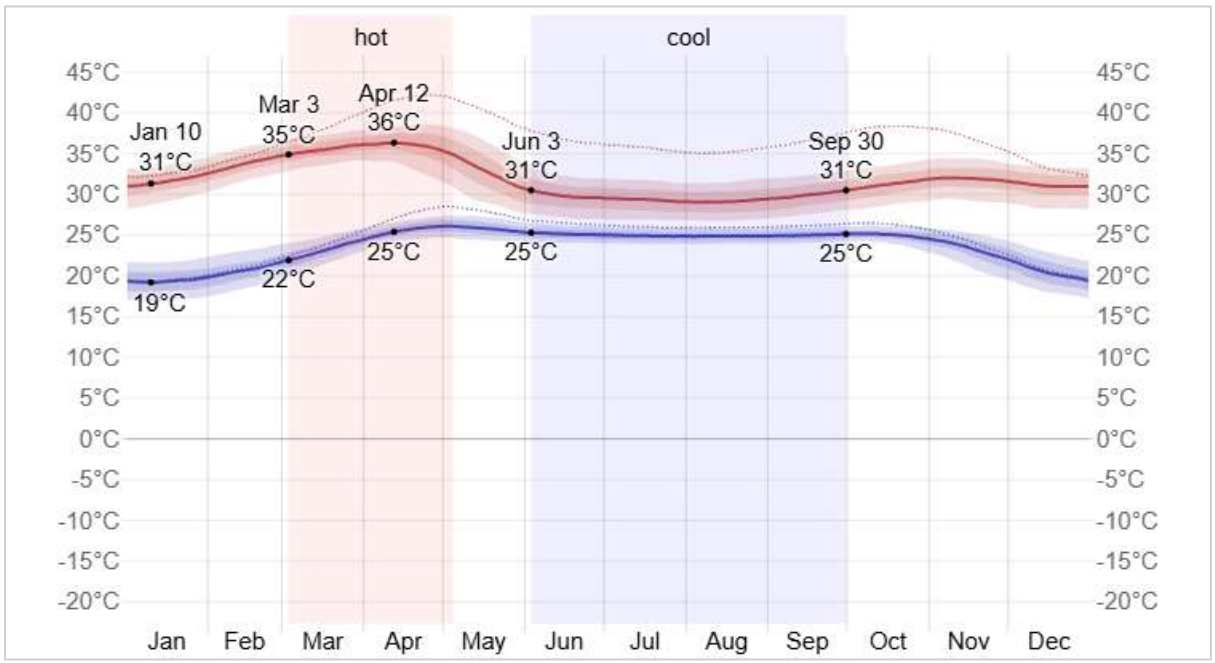
Figure 6-15 Yearly Mean Precipitation in Kamayut Township (1995-2024)

Humidity: Humidity in Yangon is strongly influenced by the dew point, which determines how easily perspiration evaporates from the skin and cools the body. Lower dew points feel drier, while higher dew points create a more humid sensation. Unlike temperature, which can fluctuate significantly between day and night, the dew points change more gradually. The period with the highest humidity lasts for 10 months, from February 22 to December 24. January is the month with the fewest muggy days, with only 15.4 days experiencing muggy conditions or worse.

Figure 6-16 Humidity Comfort Levels in Yangon (2025)

6.1.1.1 Highest and Lowest Temperature

According to the figure below, the hot season in Yangon lasts for two months, from March 3 to April 12, with average daily high temperatures exceeding 35°C. April is the hottest month, recording an average high of 36°C and a low of 26°C. The cool season spans 4 months, from June 3 to September 30, with average daily high temperatures below 31°C. January is the coldest month, with an average low of 19°C and a high of 32°C.



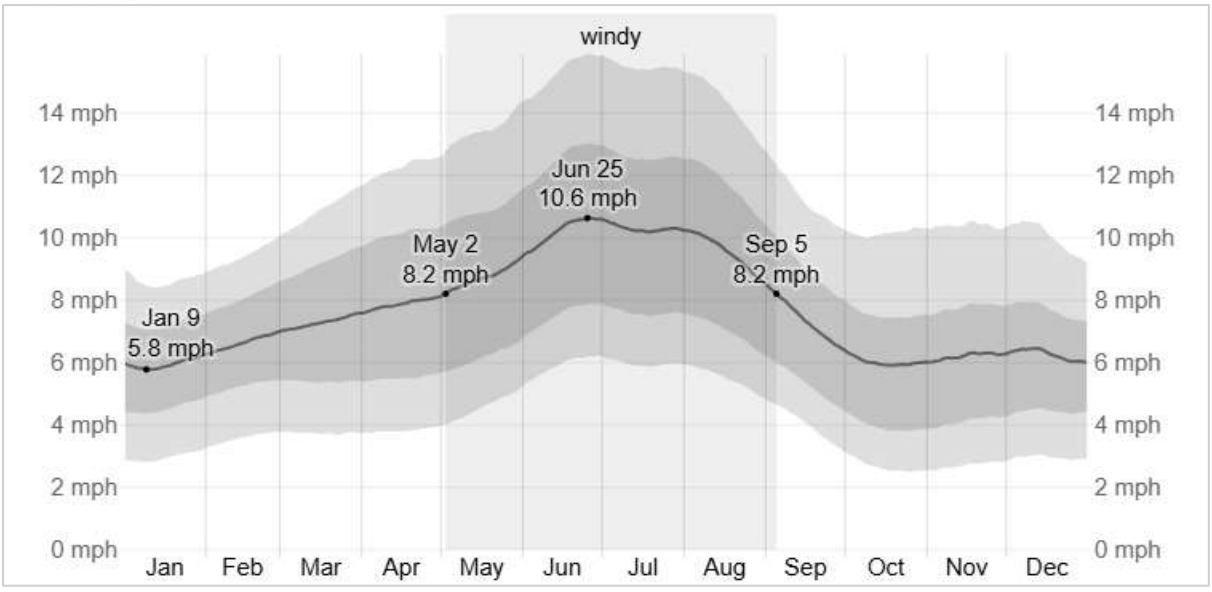
Source: weatherspark.com

Figure 6-17 Average High and Low Temperatures in Yangon (2025)

6.1.1.2 Wind Direction and Wind Speed

The wind patterns in Yangon exhibit seasonal variations throughout the year. The wind direction and speed typically follow a monsoonal pattern, with predominant winds from the southwest during the monsoon season and from the northeast during the dry season.

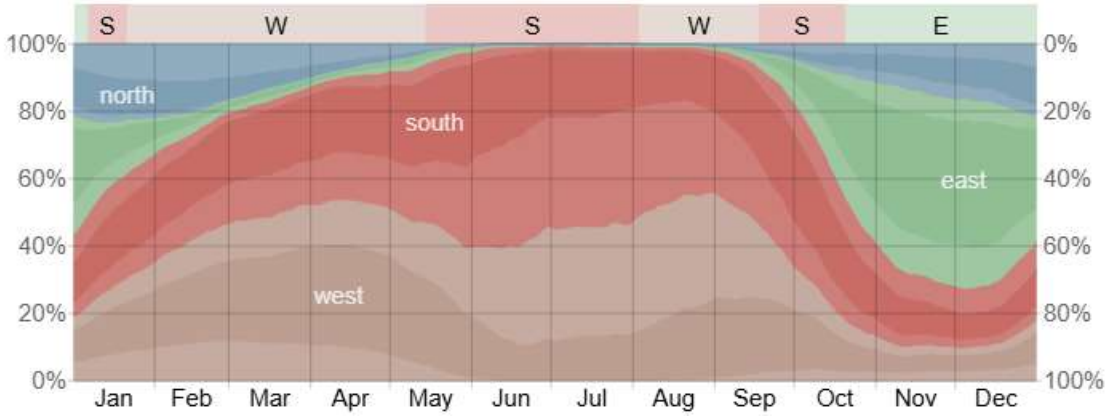
The graph illustrates wind speeds in Yangon over the year. The windiest period occurs between May and September, with the highest wind speed recorded at 10.6 mph on June 25. Wind speeds gradually increase from 5.8 mph on January 9 to 8.2 mph on May 1. After peaking in June, wind speeds decrease to 8.2 mph on September 5 and further decline toward the end of the year.



Source: weatherspark.com

Figure 6-18 Average Wind Speed in Yangon (2025)

The following graph displays the relative percentages of wind direction in Yangon and illustrates how the direction changes monthly, with some direction increasing in percentage during certain months while others decrease.



Source: weatherspark.com

Figure 6-19 Wind Direction in Yangon (2024)

6.1.1.3 Natural Disasters

According to the Kamayut Township Information (GAD, 2023), there were no storms, tsunamis, earthquakes, or floods during the reporting period. The only natural disaster that occurred was a fire hazard in Kamayut Township.

Table 6-18 Occurrence of Natural Disasters in Kamayut Township

No.	Type of Natural Disaster	Frequency of Occurrence	Number of dead	Structural Damage	Loss of Value (million kyats)
1	Storm	-	-	-	-
2	Tsunami	-	-	-	-
3	Earthquake	-	-	-	-
4	Flood	-	-	-	-

No.	Type of Natural Disaster	Frequency of Occurrence	Number of dead	Structural Damage	Loss of Value (million kyats)
5	Fire Hazard	1		6	8,850,000
Total		1		6	8,850,000

Source: Kamayut Township Information (GAD, 2023)

Earthquake

Myanmar lies on Alphide Belts, one of the two main earthquake belts of the world with a complex seismotectonic processes. The major faults in Myanmar are some unnamed major faults in north-western Myanmar, Kabaw Fault along the Kabaw Valley, in western, the well-known Sagaing Fault, and the Kyaykkyan Fault situated west of Naungcho. The Sagaing Fault is the most prominent active fault in Myanmar extends from north along the Ayeyarwaddy River north of Mandalay and along the eastern margin of the Bago Yoma to the Andaman Sea. It has been the originator of a large proportion of destructive earthquakes in Myanmar. The Yangon is in the southern segment of the Sagaing Fault.

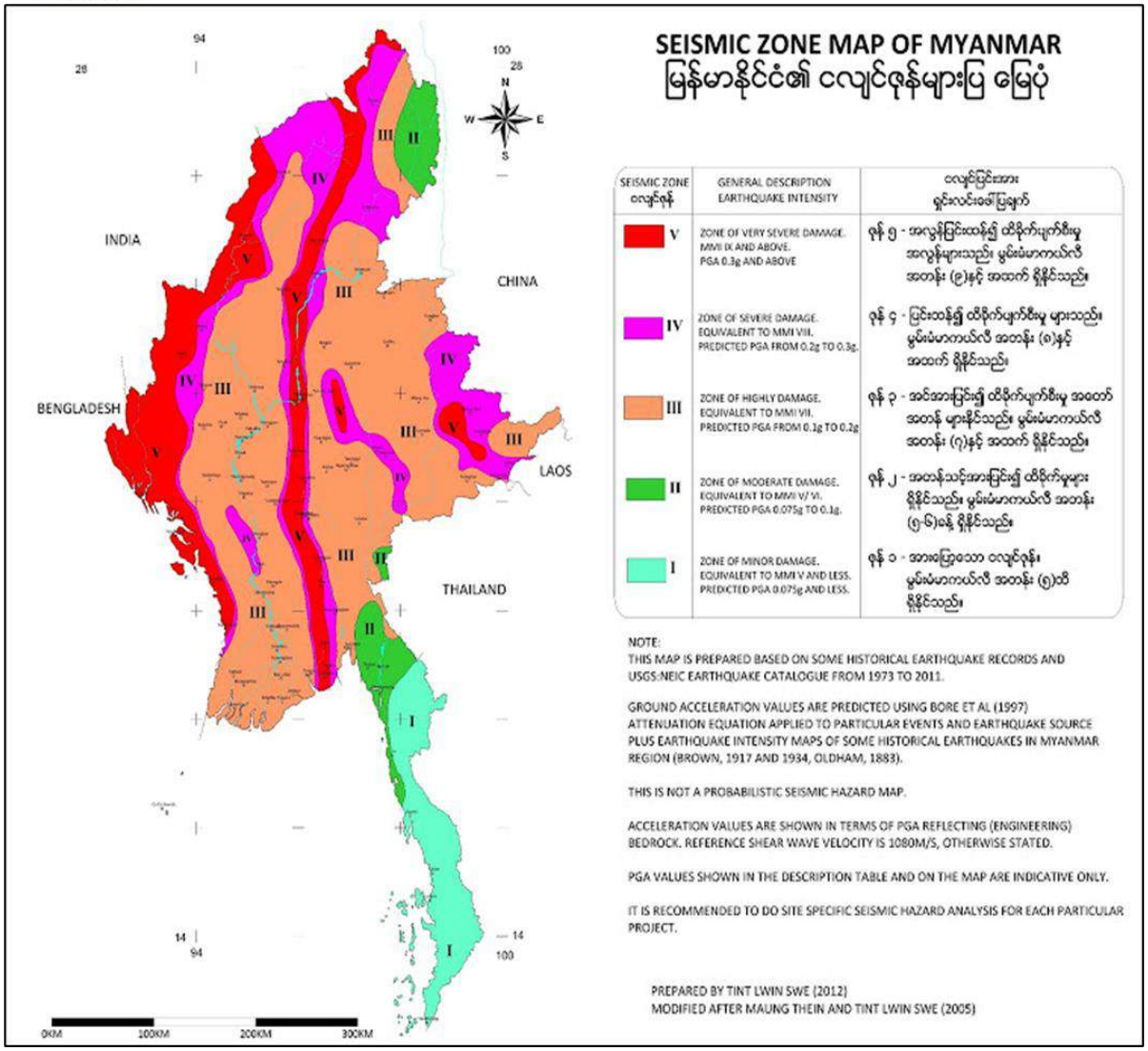
The Sagaing Fault is divided into three main segments:

- Northern Segment– Less active in recorded history, but still capable of generating large earthquakes.
- Central Segment– Passes through Mandalay, Ava, and Sagaing, making it one of the highest-risk areas.
- Southern Segment– Includes Bago and Yangon, densely populated regions where earthquakes could cause massive destruction.

According to the research (Nobuo Hurukawa and Phyo Maung Maung, 2011), the Sagaing Fault is historical earthquake since 1918, considering length of the first seismic gap, a future earthquake of up to approximately M 7.9 is expected to occur in central Myanmar.

The well-known Bago earthquake, struck on May 5, 1930, with a magnitude of 7.3, caused 500 casualties and a certain amount of damage in Bago while causing 50 deaths. Moderate to severe structural damage and landscape deformation experienced in Yangon as a result of the Bago earthquake. The strongest recent earthquake of the past 10 years near Bago occurred on January 12, 2018. It had a magnitude of 6 and struck 76 miles (123 km) north-northwest of Bago, at a depth of 6 miles.

On March 28, 2025, at 12:50 PM Myanmar time, a powerful Magnitude 7.7 earthquake struck near Mandalay, central Myanmar, at a depth of 10 km. The event caused widespread damage and was felt across the country. This was the strongest earthquake in Myanmar since 1912 and the second deadliest in the country's modern history, with only the 1930 Bago earthquake causing more casualties. The following USGS intensity map shows the shaking pattern and severity across Myanmar and surrounding areas.



Source: Tint Lwin Swe (2012)

Figure 6-20 Seismic Zone Map of Myanmar

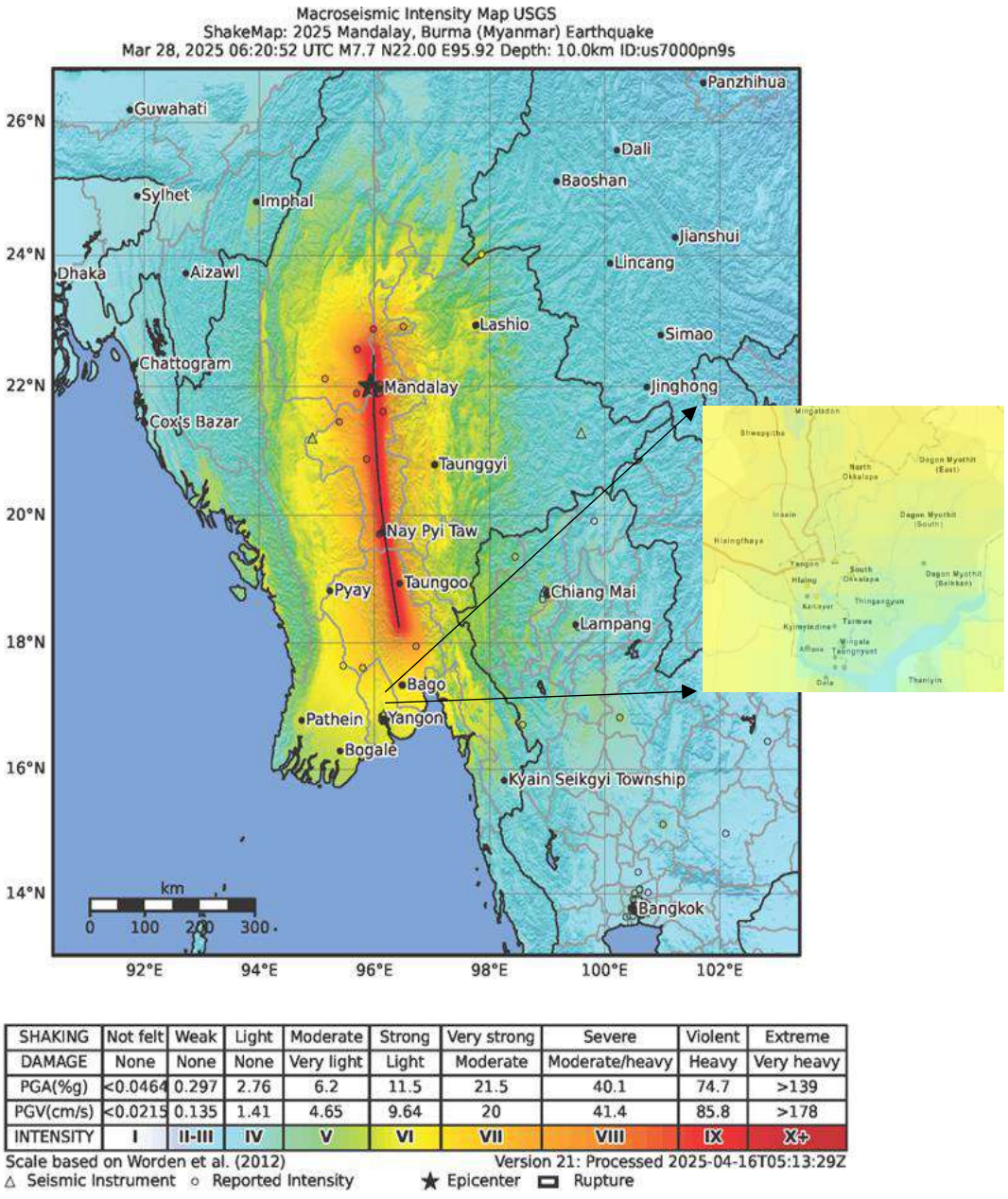
The table below shows a summary of the Modified Mercalli (MM) Scale and the expected levels of damage.

Table 6-19 Summary of Modified Mercalli (MM)

Zone	MM Classes	Probable Damage	Explanation of Damage
V	IX	Major Damage	Considerable damage in specially designed structures Major damage in good RC buildings
IV	VIII	Considerable Damage	Considerable damage in good RC buildings Major damage in ordinary brick buildings
III	VII	Moderate Damage	Moderate damage in good RC buildings Considerable damage in ordinary brick buildings
II	V-VI	Minor Damage	Minor damage in good RC buildings Moderate damage in ordinary brick buildings
I	V	Slight Damage	Minor damage in ordinary brick buildings

According to the seismic zone map of Myanmar, Yangon is in Seismic Zone III, IV and V, which are considered a high earthquake risk area. Kamayut Township is located in Seismic

Zone III according to the Seismic Zone Map of Myanmar. This means it is an area with moderate earthquake risk. The ground acceleration in Zone III typically ranges from 0.1g to 0.2g, where "g" is the force of Earth's gravity. This level of shaking corresponds to Modified Mercalli Intensity (MMI) VII, which can cause moderate damage to reinforced concrete buildings and considerable damage to ordinary brick structures. Consequently, the project must take this into account by including proper emergency preparedness and response plans.



Source: USGS

Figure 6-21 Micro Seismic Intensity Map

According to the Micro seismic Intensity Map (2025), Kamayut Township experienced MMI V during a recent event linked to the Sagaing Fault. This level of shaking is classified as moderate. People could feel the shaking clearly, but the impact was mostly limited to non-structural damage like cracks in walls or falling objects. No injuries or major damage were reported.

The Peak Ground Acceleration (PGA) in the area was between 2.76% and 6.2% of gravity, and Peak Ground Velocity (PGV) was measured between 1.41 to 4.65 cm/s, which are typical indicators of moderate seismic activity.

Although the recent earthquake had minimal effects, historical data such as the 1930 Bago earthquake, which caused severe damage, highlight the need for preventive actions. For a hotel located in Kamayut Township, it is important to develop and implement emergency preparedness and response plans. These should include:

- Earthquake risk assessments
- Evacuation routes and procedures
- Structural safety checks of buildings
- Training for staff and guests on what to do during an earthquake

By preparing in advance, the hotel can help ensure the safety of occupants, reduce damage, and maintain continuous operations in the event of future seismic activity.

6.2.4 Topography and Soil

The Kamayut Township is located in the north-central part of Yangon. It consists of ten wards and is bordered by several other townships. Kamayut township is located between North Latitude 16° 48′and 16° 15′, and East Longitude 96° 06′ to 96° 08′. It measures 0.5 miles from east to west and 1.25 miles from south to north. It shares Hlaing Township in the north, Hlaing Township and Kyimyindaing Township in the west. On the eastern part, Kamayut is adjacent to the Inya Lake, Bahan Township and Mayangone Township. To the south, it is bordered by Sanchaung Township. The total area of Kamayut Township in square miles is as follows:

Table 6-20 Geographical Information of Kamayut Township, Yangon

No.	Township Name	Town Area (Sq-mile)	Village Tract (Sq-mile)	Township Area (Sq-mile)
1.	Kamayut	-	-	2.4
Total of Township		-	-	2.4

Source: Kamayur Township Information (GAD, 2023)

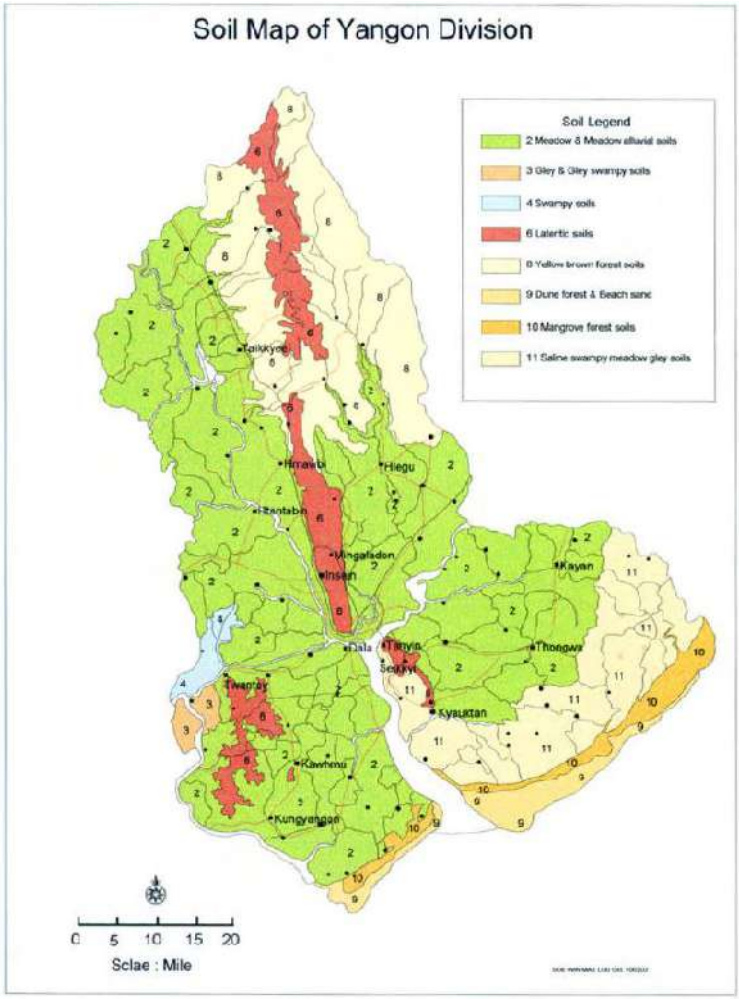
According to the Kamayut Township Information (GAD, 2024), the township is situated at the foothills of the Bago Yoma Mountain Range, with a terrain that is predominantly smooth and flat. The elevation of the township is over 50 feet above mean sea level.

The topology of the township is characterized by lowland areas that are typical of the Yangon region. The land is primarily level with minimal hills, which leads to urban development. The township layout includes both residential and commercial zones, and it is crossed by several minor roads and drainage systems that help manage the flow of water.

Kamayut Township, located in Yangon, Myanmar, has soils that are typically associated with urban and peri-urban areas, influenced by human activity and land use. The soil in Kamayut Township consists mostly of alluvial soils or lateritic soil, which are rich in nutrients and ideal for agricultural use. The soil texture is generally loamy, with a balance of sand, silt, and clay that allows for good water retention and drainage. In certain areas close to the riverbanks, the

soil may be silty, with a higher risk of erosion, especially during the rainy season. The presence of organic matter in the soil supports the growth of vegetation, contributing to the green spaces within the township.

Due to the increase of urbanization in Kamayut, much of the soil is impacted by construction, road development, and waste accumulation, often leading to compacted and disturbed soils that are less fertile than natural soils. These types of soils are shaped by the region's hydrological and urban processes and may require specific management approaches for land use or construction projects.



Source: Land Use Division (DOA)

Figure 6-22 Soil Map of Yangon

6.2.5 Hydrology and Water Resources

Yangon city lies at the confluence of the Bago River and Hlaing River. The two rivers meet at the confluence of the Yangon River, which is coEnnected to the Gulf of Mottama. The Pan Hlaing River and Twantay Canal, which converge and run downstream the Yangon River, as well as the Kokkowa River which connects with the Hlaing River, all obtain its water from the Ayeyarwaddy River. These rivers are water sources for the expansion of Yangon City's water demand.

Hlaing River flows from north to south and has a length of 0.5 miles and 0.1-mile width into the west Kamayut Township.

6.2.6 Land Use

The total land area of Kamayut Township is 3,072 acres, with distinct allocations for various land uses. Townland constitutes the largest share, accounting for 50% (1,536 acres) of the total area. Urban residential land covers 29.3% (900 acres), followed by cultural, cemetery, and building areas, which occupy 16.1% (496 acres). Riparian and subterranean land accounts for 2.1% (64 acres), while road land represents 2% (62 acres). Railway land comprises 0.5% (14 acres). The areas for arable, fallow, pasture, industrial, and other land uses are not specified. This allocation reflects a significant emphasis on residential and townland uses within the township. Table 6-3 shows these types of land use areas in the acres of Kamayut Township.

Table 6-21 Types of Land Use

No.	Type of land use	Area (acre)
		Kamayut Township
1.	Total areas of arable land	-
	(a) Agricultural land	-
	(b) Farm (Yar land)	-
	(c) Kine/Kyun Land (Alluvial)	-
	(d) Garden land	-
	(e) Nipa Palm land	-
2.	Total area of fallow land	-
	(a) Agricultural land	-
	(b) Farm (Yar land)	-
	(c) Kine/Kyun Land (Alluvial)	-
	(d) Garden land	-
	(e) Nipa Palm land	-
3.	Pasture land	-
4.	Industrial land	-
5.	Townland	1,536
6.	Railway Land	14
7.	Road Land	62
8.	Riparian and Subterranean Land	64
9.	Urban Residential Land	900
10.	Cultural, Cemetery, Building area	496
11.	Others	-
Total area		**3,072**

Source: Kamayut Township Information (GAD,2023)

6.3 Biological Environment

The Novotel Yangon Max Hotel is currently in the operation stage and located in the urban residential and business area, and no biological resources are observed. Therefore, the examination and survey are excluded from the scope of this IEE report.

Natural Regenerations

The natural regenerations that grow in Kamayut Township are *Tectona grandis* (Kyun), *Pterocarpus macrocarpus* (Padauk), *Xylia dolabriformis* (Pyinkado), *Dalbergia kurzii* (Thit Pok), *Sandoricum koetjape* (Thit To), *Albizzia lebbek* (Kokko), *Azadirachta indica* (Tama), *Acrocarpus fraxinifolius* (Ye-tama), *Cocos nucifera Linn* (Coconut), *Chrysalidocarpus lutescens* (Palm), *Tamarindus indica* (Tamarind), *Zizyphus mauritiana* (Zi), *Terminalia belerica* (Thit Seint), *Pentacme siamensis* (Ingyin).

6.4 Social Environment

6.4.1 Population Data and Demographics

The total population of Kamayut Township is 84,569, and there are more females than males with 78 males per 100 females. The entire population in the Township lives in urban areas. The population of conventional households in urban areas is 72,697 and the number of conventional households is 16,299. There are 4.5 persons living in each household in Kamayut Township. This is slightly higher than the Union average. The township comprises ten wards. The following table is described the population and number of conventional households in each ward.

Table 6-22 Population and Number of Conventional Households in Kamayut Township

Sr	Ward	No. of Conventional Households	Population		
			Total	Males	Females
	Total	16,299	84,569	36,958	47,611
	Ward	16,299	84,569	36,958	47,611
1	No (1) Ward	2,457	13,291	5,889	7,402
2	No (2) Ward	1,018	5,819	2,490	3,329
3	No (3) Ward	3,430	17,021	6,695	10,326
4	No (4) Ward	2,423	11,021	4,909	6,112
5	No (5) Ward	1,478	6,863	3,086	3,777
6	No (6) Ward	847	4,038	1,846	2,192
7	No (7) Ward	1,322	6,907	3,573	3,334
8	No (8) Ward	1,639	8,603	3,606	4,997
9	No (9) Ward	842	5,083	2,240	2,843
10	No (10) Ward	843	5,923	2,624	3,299

Source: Kamayut Township Census Report, 2014

According to the Census Report (2014), the majority of the households in Kamayut Township are living in apartment or condominium (75.1%) followed by households in wooden houses (8.9%). The proportion of households with improved sanitation facilities in Yangon Region is 91.1 percent while it is 74.3 percent at the Union level.

Table 6-23 Demographic Characteristics of Kamayut Township

Items	Key demographic characteristics
Age structure:	The population of Kamayut Township is relatively young, with a median age of 21.5 years.
Gender ratio:	The gender ratio in Kamayut Township is slightly skewed towards males, with 78 males per 100 females.
Literacy rate:	The literacy rate in Kamayut Township is 99.1%, which is higher than the Yangon Region (96.6%) and the Union (89.5%).

Source: Kamayut Township Census Report, 2014

Table 6-24 Number of Housing/Households of Kamayut Township till June 2023

No.	Content	Housing	Household	Ward	Village Tract	Village
1.	Urban	4,284	17,831	10	-	-
2.	Rural	-	-	-	-	-
Total		**4,284**	**17,831**	**10**	**-**	**-**

Source: Kamayut Township Information (GAD, 2023)

Table 6-25 Total Population of Kamayut Township till June 2023

No.	Content	Over (18) years			Under (18) years			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1.	Urban	20,115	32,629	52,744	18,561	10,444	29,005	38,676	43,073	81,749
2.	Rural	-	-	-	-	-	-	-	-	-
Total		**20,115**	**32,629**	**52,744**	**18,561**	**10,444**	**29,005**	**38,676**	**43,073**	**81,749**

Source: Kamayut Township Information (GAD, 2023)

Table 6-26 Number of Population of Birth Rate, Mortality and Migration

No.	Township/ Town	Previous Population	Birth rate	Mortality rate	Migration Population (In)	Migration Population (Out)	Current Population
1.	Kamayut	82,360	626	705	1,324	1,856	81,749
Total		**82,360**	**626**	**705**	**1,324**	**1,856**	**81,749**

Source: Kamayut Township Information (GAD, 2023)

6.4.2 Ethnicity Religion

The township is home to a wide range of religious, racial and ethnic groups. Kamayut Township exhibits a predominantly Burmese population, comprising 92.306% of the total, with notable ethnic diversity including Kayin and Mon. A smaller proportion of Kachin, Chin, Rakhine, and Shan also contribute to the township's ethnic composition.

Table 6-27 Percentage of Ethnicity

No.	Ethnicity	Percentage of township population
1.	Kachin	0.170 %
2.	Kayah	0.034 %
3.	Kayin	3.618 %
4.	Chin	0.251 %
5.	Mon	2.158 %
6.	Burma	92.306 %
7.	Rakhine	0.438 %
8.	Shan	0.807 %
9.	Others	-
Total		**99.782 %**

Source: Kamayut Township Information (GAD, 2023)

Table 6-28 Population in Kamayut Township according to Religion

No.	Township	Buddhist	Christian	Hindu	Islam	Animist	Other Religion	Total
1	Kamayut Township	78,290	3,392	59	8	-	-	81749
Total		**78,290**	**3,392**	**59**	**8**	**-**	**-**	**81749**

Source: Kamayut Township Information (GAD, 2023)

The township is home to a wide range of religious, racial, and ethnic groups. These ethnic groups have their own unique cultures and traditions.

6.4.3 Education

According to the Kamayut Township GAD 2023, above 15 years old people have mostly completed primary, middle and high school. There are 6 high schools, a middle school, 11 primary schools, a nursery school, 6 Universities and a College in Kamayut Township. There is no monastic school. The details are described in the following tables.

Table 6-29 Universities and Colleges in Kamayut Township

No.	University/ College	Location	Area (acres)	Teachers	Students	Ratio of Teacher and Student
1	Yangon University	Ward (9)	192.07	726	7645	1:10.53
2	Economy University	Ward (9)	7.89	230	7162	1:31.14
3	University	Ward (9)	41.884	198	6989	1:35.30
4	Distance University	Ward (9)	5.47	86	-	-
5	University of Foreign Language	Ward (9)	6.642	106	3118	1:29.42
6	University of Medicine (1)	Ward (4)	15.29	232	481	1:2.07
7	College	Ward (4)	14.678	28	117	1:4.18
Total				**1606**	**25512**	**1:15.89**

Source: Kamayut Township Information (GAD, 2023)

Table 6-30 Education High Schools in Kamayut Township

No.	Name	Location	Area (acres)	Teachers	Students	Ratio of Teacher and Student
1	No. (1), High School	Ward (10)	4.874	15	1020	1:68
2	No. (2), High School	Ward (10)	0.185	46	94	1:2.04
3	No. (3), High School	Ward (6)	4.125	15	157	1:10.47
4	No. (4), High School	Ward (2)	0.552	22	224	1:10.18
5	No. (5), High School	Ward (3)	0.451	35	119	1:3.4
6	Practicing School Yangon Institute of Education (TTC)	Ward (9)	27.70	85	2093	1:24.62
Total				**218**	**3707**	**1:17**

Source: Kamayut Township Information (GAD, 2023)

Table 6-31 Nursery, Primary and Middle Schools in Kamayut Township

No.	Name	Total	Location	Area (acres)	Teachers	Students	Ratio of Teacher and Student
1	No. (2), Middle School	1	Ward (1)	0.371	9	71	1:7.89
2	Primary School	11	-	-	40	365	1:9.12
3	No. (1), Nursery School	1	Innya Road	-	1	-	1:0

Source: Kamayut Township Information (GAD, 2023)

In Kamayut Township, the literacy rate for youth aged over (15) years is 63,653. The following table shows the details.

Table 6-32 Youth Literacy Rate of Kamayut Township

No.	Township	Township Population	Population over (15) years	Population of Literacy	Literacy Rate
1	Kamayut	81,749	63,653	63,653	100%

Source: Kamayut Township Information (GAD, 2023)

6.5 Public Health

The number of hospitals, health care centres and the most common diseases are shown in the following table. There are 58 clinics in each ward of the Kamayut Township.

Table 6-33 Hospitals in Kamayut Township

No.	Name	Location	Government/ Private	No. of Beds
1	University Hospital	Ward (9)	Government	100
2	Thukha Kabar	Ward (2)	Private	50
3	Moe Myittar	Ward (1)	Private	25
4	Mitta Oo	Ward (8)	Private	16
5	Myint Myat Taw Win	Ward (8)	Private	16
6	American Vision	Ward (2)	Private	16
7	Grand Hantha	Ward (6)	Private	700
Total				**923**

Source: Kamayut Township Information (GAD, 2023)

In Kamayut Township, the common diseases are tuberculosis (TB). According to the Kamayut Township data GAD 2023, the tuberculosis (TB) is occurring with a record of 116 cases and no death has occurred. There are 17 cases of HIV/AIDS during 2022-2023, however, no dead occurred during this year. The following table shows the details of the occurred diseases.

Table 6-34 Most Common Occurred Diseases

Types of Diseases													
No.	Township	Malaria		Diarrhea		TB		Dysentery		Hepatitis		HIV/AIDS (2016-2023)	
		Case	Death	Case	Death	Case	Death	Case	Death	Case	Death	Case	Death
1	Kamayut	-	-	-	-	116	-	-	-	-	-	-	-

Source: Kamayut Township Information (GAD, 2023)

The majority of the population in Kamayut Township has access to healthcare which can access in the hospitals, and clinics.

Table 6-35 Health Care Treatment for People

No.	Township	No of People	Health from Doctor		Health care from Nurse		Health care from Assistant Health Officer	
			No. of Doctor	Doctor vs People	No. of Nurse	Nurse vs People	No. of Assistant Health Officer	Assistant Health Officer vs People
1.	Kamayut	81749	6	1:1362	10	1:81749	1	1:81749
Total		81749	6	1:1362	10	1:81749	1	1:81749

Source: Kamayut Township Information (GAD, 2023)

The maternal and child health situation in Kamayut Township has improved significantly in recent years. However, there are still some challenges that need to be addressed. The details are described in the following table.

Table 6-36 Maternal and Baby Health Care before and after Birth

No.	Township	No of Mother	No of Infant	Health care from Nurse		Health care from Assistant Health Officer	
				Birth Rate	Death of Mother	Death of Baby After Birth	Miscarriage
1.	Kamayut	497	462	5.59	-	2.16	-
Total		497	462	5.59	-	2.16	-

Source: Kamayut Township Information (GAD, 2023)

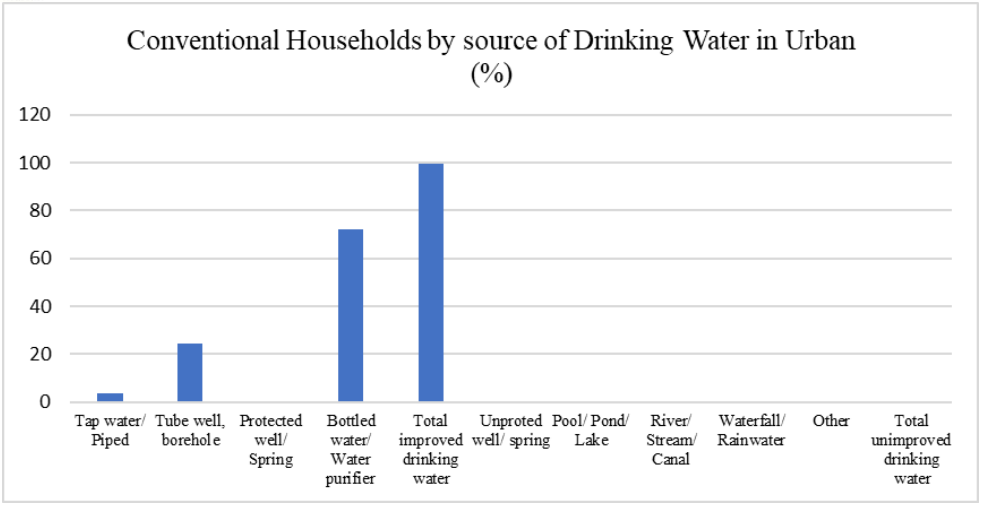
The sanitation situation in Kamayut Township has improved sanitation facilities in flush toilet (31.2%), water seal (improved pit latrine, 68.6%) of some 99.8% of the households. Compared to other townships in Yangon Region, Kamayut is in the highest proportion of households group with improved sanitation facilities.

Table 6-37 Conventional Households by Type of Toilet by Urban/Rural

Type of toilet		Total	Urban	Rural
Flush		31.2	31.2	-
Water seal (Improved pit Latrine)		68.6	68.6	-
Improved sanitation		99.8	99.8	-
Pit (Traditional pit latrine)		0.2	0.2	-
Bucket (Surface latrine)		-	-	-
Other		< 0.1	< 0.1	-
None		< 0.1	< 0.1	-
Total	Percent	100.0	100.0	-
	Number	16,299	16,299	-

Source: Kamayut Census Information, 2014

The health and sanitation situation Kamayut Township has improved significantly in recent years. According to the Kamayut Township Census Information, 2014, 99.7 percent of households use improved sources of drinking water (tap water/piped, tube well, borehole, protected well/spring and bottled water/water purifier). Some 0.3 percent of the households use water from unimproved sources.



Source: Kamayut Township Census Information, 2014

Figure 6-23 Source of dirnking water in Urban and Rural of Kamayut Township

In Kamayut Township, 99.7 percent of the households use electricity for lighting. This proportion is in the highest group in electricity usage compared to other townships in Yangon Region. The percentage of households that use electricity in Yangon Region is 69.3 percent.

6.5.1 Economy

Kamayut Township is located in the Yangon Region, and is an economically significant township. The local residents primarily work in trade and business. The township is situated at a well-connected area with good transportation links. According to the Kamayut Township GAD 2023, there are no agricultural, livestock activities and farming production. However, there are 14 small-scale manufacturing or production activities and 11 home based small business.

6.5.2 Transport Infrastructure

The Kamayut Township utilizes land transportation predominantly preferred by locals for daily commuting and travel purposes. According to the Kamayut Township Information (GAD, 2023), the township features one circular railway that facilitate inter-transportation, for local transportation. Infrastructure-wise, the township has four bridges spanning over 180 feet in length, alongside seven bridges under 180 feet, essential for joint connectivity across different areas. The road network within the township comprises five primary roads, linking to neighbouring townships. This comprehensive transportation infrastructure underscores efficient mobility and connectivity, supporting socio-economic development and community well-being. The details are shown in the following tables.

Table 6-38 Railway and Stations in Kamayut Township

No.	Type of Railway	Intown (within Township)		Length (mile)	Station	
		From	To		Large	Small
1	Circular Railway	Hanthawady	Hleden	0.75	-	1
Total		Hanthawady	Hleden	0.75	-	1

Source: Kamayut Township Information (GAD, 2023)

Table 6-39 Names of Roads Connecting to Surrounding Township

No.	Road	Length (Mile-Furlong)	Types of Roads (Mile-Furlong)			Remark
			Bituminous Road	Unpaved Road	Paved Road	
1	Pyay	1 – 6.64	Bituminous Road	-	-	
2	Inn Sein	0- 4.8	Bituminous Road	-	-	
3	Bayint Naung	0-5.84	Bituminous Road	-	-	
4	U Wi Sar Ra	0-1.84	Bituminous Road	-	-	
5	Baho	1-1.2	Bituminous Road	-	-	
Total		6mile-2 furlong		-	-	-

Source: Kamayut Township Information (GAD, 2023)

Table 6-40 Over (180) ft Bridges in Kamayut Township

No.	Name of Bridge	Length (ft)	Type of Bridge	Constructed Year	Vehicle (Car/ Railway)
1	Hleden Bridge	2507	RC Bridge	30.9.2023	Car
2	Narnattaw Overpass	581	RC Bridge	10.2.2005	Car
3	Hleden Overpass	385	RC Bridge	20.3.1997	Car
4	Narnattaw Pedestrain Overpass	525	Truss	31.1.2020	People
Total		3998			

Source: Kamayut Township Information (GAD, 2023)

Table 6-41 Under (180) ft Bridges in Kamayut Township

No.	Name of (50) ft to (180) ft Bridge	Length (ft)	Type of Bridge	Constructed Year	Vehicle (Car/ Railway)	Total No. of Under (50) ft
1	Tatar Phyu Pedestrian Overpass	97	RC Bridge	2016	People	-
2	Marlar Saung Pedestrian Overpass	90	RC Bridge	2017	People	-
3	Innsein Road Pedestrian Overpass	86	RC Bridge	2015	People	-
4	Kamayut Chaung (Pyay Road)	89	RC Bridge	-	Car	-
5	Kamayut Chaung (Innsein Road)	72	RC Bridge	-	Car	-
6	Kamayut Chaung (Baho Road)	58	RC Bridge	-	Car	-
7	Kamayut Chaung (Baho Road)	80	RC Bridge	-	Car	-
Total		572				

Source: Kamayut Township Information (GAD, 2023)

6.5.3 Employment, Income and Poverty

Income

According to the GAD (2023) data, the following table shows that income in the Kamayut Township.

Table 6-42 Income in Kamayut Township

No.	2021 (mmk)	2022 (mmk)	2023 (mmk)
1	3,865,331	3,796,978	3,799,650
Total	3,865,331	3,796,978	3,799,650

Source: Kamayut Township Information (GAD, 2023)

Employment

According to the Kamayut Township Information (GAD 2023), there are 146,452 persons of workable person. The number of employed persons in Kamayut Township is 94.78%, and the unemployment percentage is 5.21% of local work.

Table 6-43 Number of Employment in Kamayut Township

No	Township	No of Workable person	No of employed person	No of unemployed person	% of unemployed person
1	Kamayut	52,744	49,992	2,752	5.21%
Total	Kamayut	52,744	49,992	2,752	5.21%

Source: Kamayut Township Information (GAD, 2023)

6.5.4 Cultural and Historical Components

Environmental Impact Assessment (EIA) Procedure (2015) points out that the Initial Environmental Examination (IEE) process has to describe the surrounding environment including physical, biological, social, socio-economic and cultural features and the identification and assessment of potential environmental impacts. Therefore, E Guard study team assessed the existing cultural and historical buildings within the project's area of interest, evaluating the potential impacts of the project on these sites. According to "The Protection and Preservation of Ancient Monuments Law (2015)", the ancient monument is defined as buildings, sites, or structures that were inhabited, constructed, or utilized by humans, as well as geological areas where fossils over a hundred years old are discovered, whether on or beneath the ground, or in water. There are approximately 200 properties recorded as cultural heritage in the Yangon Region by Yangon City Development Committee. The proposed project is located in Kamayut Township, Yangon which is rich of urban landscapes and cultural significances. Kamayut Township has experienced rapid urbanization, with a mix of residential, commercial, and institutional developments. There are some culturally significance buildings in the vicinity of the project. These structures are considered part of the colonial heritage of Yangon, representing architectural styles and cultural significance from the early 20th century. The cultural and historical buildings feature in the project area, distance from the project are presented in table 1.

According to the GAD (2023) data, there are 3 pagodas, stupas and 21 famous monasteries in Kamayut Township. The following table shows the monastic facilities in Kamayut Township.

Table 6-44 Monastic Facilities in Kamayut Township

No.	Township	Pagodas	Shrines	Stupa	Monasteries	Convent School	Chapels
1.	Kamayut Township	3	7	-	21	-	8
Total		**3**	**7**	**-**	**21**	**-**	**8**

Source: Kamayut Township Information (GAD, 2023)

Table 6-45 Cultural and Historical buildings near Novotel Hotel project

No	Building	Location	Types of building	Distance from the project (km)	Founding Year
1.	Tagaung Hostel	Pyay Road, Kamayut Township, Yangon Region	Government Hostel	0.24 km	1924
2.	Pyay Hostel	Thahtone street, Kamayut Township, Yangon Region	Government Hostel	0.24 km	1924
3.	Mitayya Chinese Temple (ချန်တက်ထန့်ဘုရားကျောင်း)	Pyay Road, Kamayut Township, Yangon Region	Chinese Temple	0.11 km	1998

Source: https://www.ycdc.gov.mm/heritages#141

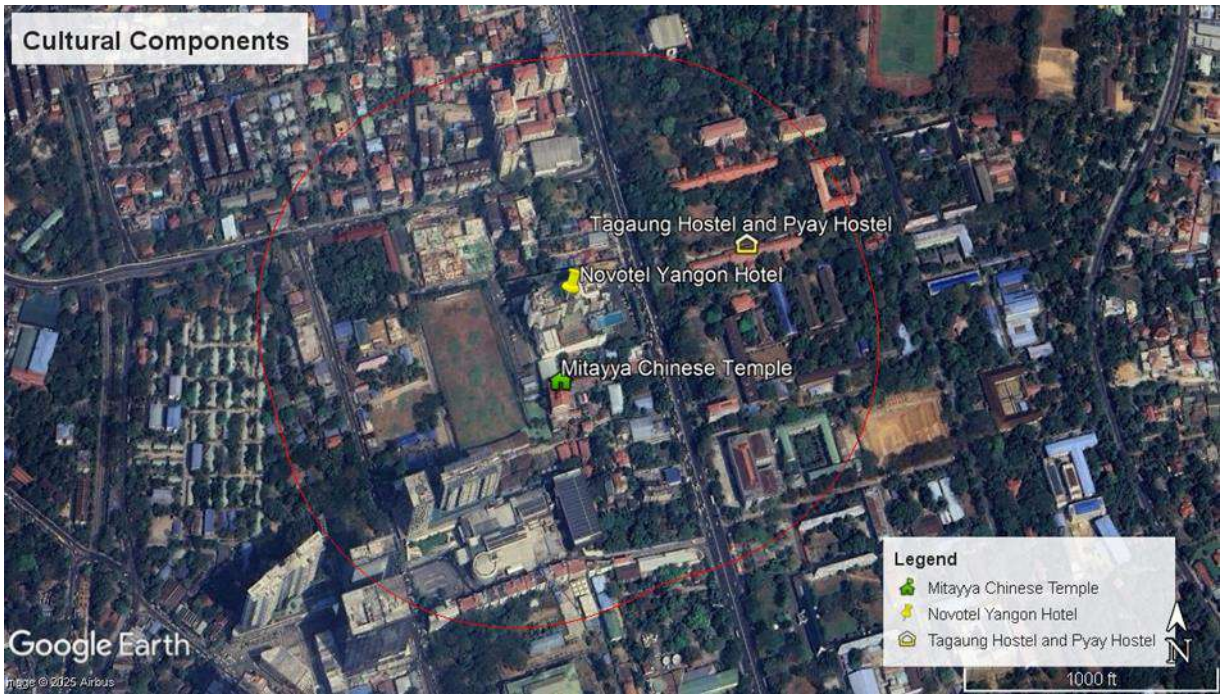


Figure 6-24 Location map of nearby cultural components

1. Tagaung Hostel

2. Pyay Hostel

3. Mitayya Chinese Temple (ချင်္ကတ်ထန့်ဘုရားကျောင်း)

Source: https://www.winnetmyanmar.com/township/kmayaut

CHAPTER 7 IDENTIFICATION AND ASSESSMENT OF POTENTIAL ENVIRONMENTAL IMPACTS

Introduction

This section outlines the methodology for assessing environmental impacts, and potential consequences of the project, based on its nature. It includes an initial identification and assessment of likely environmental and social impacts related to the proposed development.

The Novotel Yangon Max Hotel Project commences construction phase in 2015, which has been completed, and the project is currently in its operation phase. Based on the site visit, baseline environmental information from focused areas, the sensitivity and behavior of crucial environmental receptors relating to project operation are thoroughly measured and considered.

7.1 Impact Assessment Methodology

The impacts of the proposed project are assessed using the Leopold Matrix method. This framework facilitates the analysis and quantitative weighting of potential impacts. It serves as an effective tool for summarizing and ranking environmental impacts, allowing focus on those impact, which is considered to be the most significant. The Leopold matrix is a systematic and comprehensive method used to evaluate the potential environmental impacts of a proposed project. The assessment of each impact considers the strength, length, area, and frequency of activities during the two phases of the project, operation and decommissioning phases. This evaluation is qualitative, and the significance of each impact is categorized into five levels.

The following methodology has been used to assess the hotel operations, facilities, and services focusing on crucial environmental components: physical, biological, socio-economic and natural environment. Each source of impact is evaluated based on four factors: magnitude, duration, extent, and probability. Each factor is rated on a five-point scale, as described below:

Table 7-1 Impact Assessment Parameters and its Scale

Assessment	Scale				
	1	2	3	4	5
Magnitude (M)	Insignificant	Small and will have no effect on the working environment	Moderate and will result in minor changes in the working environment	High and will result in significant changes in the working environment	Very high and will result in permanent changes in the working environment
Duration (D)	0-1 year	2-5 year	6-15 year	Life of operation	Post Closure
Extent (E)	Limited to the site	Limited to the local area	Limited to the region	National	International
Probability (P)	Very improbable	Improbable	Probable	Highly probable	Definite

Significant Point (SP) = (Magnitude + Duration + Extent) x Probability

Impact Significance: Based on calculated significant point, impact significance can be categorized as follows:

Table 7-2 Impact Significance

Significant Point (SP)	Impact Significance
<15	Very Low
15-29	Low
30-44	Moderate
45-59	High
60	Very High

According to the assessment methodology, very low and low significance impacts can be regarded as negligible impacts, in which there is no significant impact on the environment. However, moderate impact can have little effect on the environment. So, some mitigation measures must be considered. The high impact can have significant changes in the environment and precise mitigation measures have to be done obviously. To reduce as well as control the impacts and disadvantages on the environment, mitigation measures must be performed.

7.2 Identification and Assessment of Potential Environmental Impacts

There may be some positive and negative impacts on the surrounding environment of the proposed project site due to the implementation of the project. These potential environmental impacts have been identified by analysing baseline environmental information and project activities. Most impacts have been assessed as accurately as possible based on value judgment. Each environmental issue has been examined regarding its current state and the likely impacts during the operation and decommissioning phases. The environmental impacts from various project activities can be categorized as follows:

- ***Impacts on Physical Environment:*** Air Quality, Water Quality, Noise and Vibration, Soil contamination, Groundwater consumption, Electricity Consumption, Waste Generation (Waste Disposal of Solid waste, Wastewater, Hazardous and non-hazardous wastes)
- ***Impacts on Biological Environment:*** No impact on Biodiversity
- ***Impacts on Social Environment:*** Socio-economic aspects, Community Health and Safety, Occupational Health and Safety and Cultural Heritage, Fire Hazards

Table 7-3 Identification of Potential Impacts for Operation Phase

Item	Impacts	Project Activities	Magnitude	Duration	Extent	Probability	Score Result	Significance
Physical Environment								
1	Air Quality	▪ Generators usage, air-conditioning, kitchen, cleaning materials, storage of fuel and chemicals	3	4	2	3	27	Low
2	Noise & Vibration	▪ Vehicular movement from guests, generators and supply vehicles on the main road. generators and machineries (The hotel used soundproof	3	4	2	2	18	Low

Item	Impacts	Project Activities	Magnitude	Duration	Extent	Probability	Score Result	Significance
		generators and quiet machinery, and there will be no significant sources of vibration.)						
3	Water Quality	▪ Domestic wastewater, hotel operations, waste disposal, drainage systems, and high-water consumption	4	4	2	3	30	Moderate
4	Soil Contamination	▪ Fuel and oil leaks from generators and maintenance improper waste disposal extensive use of impermeable surfaces	3	4	1	1	8	Very Low
5	Groundwater consumption	▪ Water consumption in bathrooms and toilets of hotel rooms ▪ Water usage for cleaning activities in hotel rooms and laundry operations. ▪ Water consumption in the kitchen	4	4	2	3	30	Moderate
6	Electricity consumption	▪ Energy usage for air conditioning and refrigerators. ▪ Electricity consumption for lighting and electrical gadgets. ▪ Pumping water from the groundwater tank	4	4	2	3	30	Moderate
Waste Generation								
7	Solid and Liquid Waste	▪ Solid Waste ▪ Domestic waste from kitchens and dining areas miscellaneous wastes ▪ Wastewater ▪ Hazardous waste from cleaning agents and other chemicals	4	4	2	3	30	Moderate
Social Environment								
8	Socio-economic Aspects	▪ Enhance the local community and its economic and well-being job opportunities	-	-	-	-	-	Positive Impact
9	Community Health & Safety	▪ Hygiene and sanitation water consumption ▪ electricity consumption ▪ traffic congestion	3	4	3	2	20	Low
10	Occupational Health and Safety	▪ Hotel operational activities chemical handling and machineries maintenance	3	4	1	4	32	Moderate

Item	Impacts	Project Activities	Magnitude	Duration	Extent	Probability	Score Result	Significance
		improper plan for health and safety						
11	Cultural Heritage	▪ Accidental fire outbreak in hotel premises, malfunctioning electrical systems or kitchen operations.	3	4	2	3	27	Low
12	Fire Hazards	▪ Improper handling or maintenance of electrical supply system ▪ Overloaded electricity usage natural disaster ▪ Electric shocking	4	4	2	3	30	Moderate

Table 7-4 Identification of Potential Impacts for Decommissioning Phase

Item	Impacts	Project Activities	Magnitude	Duration	Extent	Probability	Score Result	Significance
Physical Environment								
1	Air Quality	▪ dismantling activities ▪ exhaust emission from equipment and vehicles	4	4	2	4	40	Moderate
2	Noise & Vibration	▪ demolition machinery, such as excavators, heavy machineries and equipment	5	1	2	4	32	Moderate
3	Water Quality	▪ dismantling activities ▪ removal of infrastructures ▪ improper waste management	4	4	2	3	30	Moderate
4	Soil Contamination	▪ disposal of debris and materials, such as asbestos and concrete ▪ demolition and material removal ▪ improper waste management	4	2	1	3	18	Low
Waste Generation								
5	Waste Generation	▪ large amounts of demolition waste ▪ hazardous waste ▪ wastewater ▪ improper waste management	4	2	2	4	32	Moderate
Social Environment								
6	Socio-economic Aspects	▪ positive and negative socio-economic impacts ▪ structural demolition ▪ local employment	3	1	2	3	14	Very Low
7	Community Health & Safety	▪ structural demolition ▪ dismantling activities ▪ improper waste management	3	4	3	2	20	Low
8	Occupational Health and Safety	▪ dismantling activities ▪ exposure to hazardous chemicals ▪ improper safety measures	4	1	1	3	18	Low
9	Cultural Heritage	▪ Demolition activities can generate vibrations that may affect nearby historic structures, similar to construction- related vibrations. ▪ Debris from the demolition could be improperly handled, leading to accidental deposition on nearby historical sites.	3	1	2	4	24	Low
10	Fire Hazards	▪ Demolition activities and flammable debris, inadequate disposal of leftover materials	4	1	2	2	20	Low

7.3 Summary of Impact Significance

The project activities and the significance of impacts are provided in the table above. Primary and secondary data are used to assess the environmental impacts. The potential environmental impacts are evaluated comprehensively and scientifically. The results of the scoring evaluation of significant environmental impacts can be summarized in the following Figure 7-1.

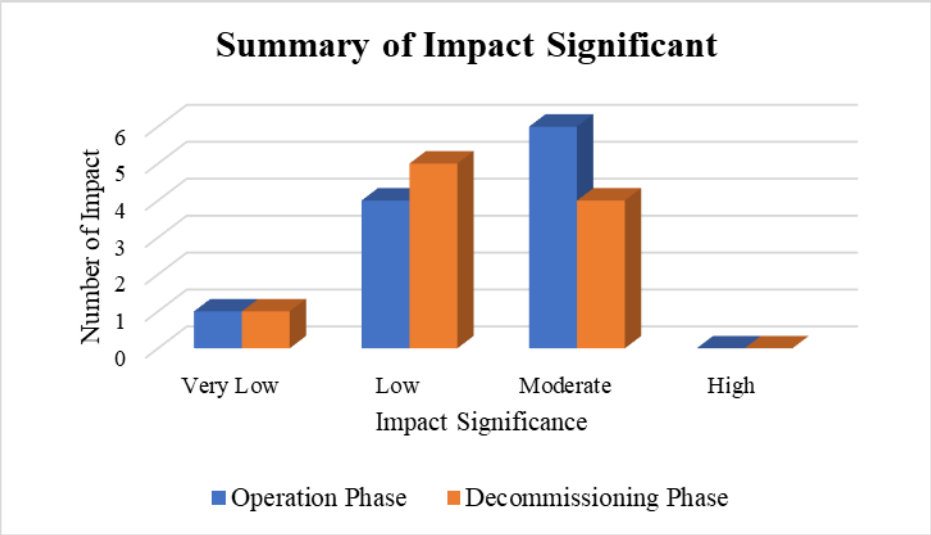


Figure 7-1 Summary of Impact Significance

According to the analysis results, it can be concluded that during the operation phase, most project activities have a moderate level of impact significance which can cause some environmental impacts. However, the decommissioning phase has the highest number of low significances impacts that indicating minor.

7.4 Potential Impacts During Operation Phase

7.4.1 Physical Environment

1) Air Quality

During the operational phase of the hotel, the primary sources of air pollution will include emissions from standby generators used during emergencies or power outages, guest vehicles, supply transport, cooking in the kitchen, and operating air conditioning systems in rooms, public areas, and conducting cleaning materials, which will slightly affect air quality. The nearby construction site may generate dust and air pollutants, which could affect air quality around the hotel. Noise from nearby residential areas, the construction site, could disturb hotel guests and affect overall air quality indirectly.

The results of the air quality measurements of the hotel are in compliance with the National Environmental Quality (Emission) Guidelines. This indicates that the overall impact on air quality is not significant, as the use of generators will be limited to short periods. Nevertheless, these potential impacts can be managed within acceptable limits by implementing appropriate mitigation measures to control air pollution.

2) Noise and Vibration

Noise and vibration impact during the operational phase of the hotel are expected to be minimal. The hotel uses soundproof generators and quiet machinery, and there will be no significant sources of vibration. However, the main sources of noise may include the vehicular movement from guests and supply vehicles on the main road, which can contribute to noise levels. The road besides the hotel can also contribute to overall noise levels, especially in a commercialized environment. While the hotel uses soundproof generators, backup generators may still produce periodic noise during power outages. Hosting outdoor events or music at the hotel could disturb the surrounding area. There are ongoing construction works near the hotel, which could contribute to some noise and vibration, particularly during working hours.

The results of noise measurements are increased significantly with the National Environmental Quality (Emission) Guidelines. Daytime noise levels are moderately higher than the guideline values and the nighttime level is significantly above. These noise levels exceed acceptable standards, and efforts should be made to address and mitigate these issues.

3) Water Quality

During the operational phase of the hotel, water quality can be impacted by several factors, including domestic wastewater, hotel operations, waste disposal, drainage systems, and high-water consumption. High water consumption from the hotel's operations can lead to groundwater depletion or contamination, particularly since groundwater from three tube wells is being used. Chemicals used for swimming pools and maintenance could potentially contaminate water if not properly managed. Improper waste disposal and drainage systems can degrade soil and water resources. Effluent from hotel operations (e.g., laundry, kitchens) may pollute nearby water bodies if untreated. Additionally, surface runoff from the hotel's impervious surfaces can contribute to water pollution. While the hotel has an efficient raw water treatment system, improper handling of the system could lead to inefficiency or contamination.

The results of water quality measurements at the hotel show that the effluent water and groundwater generally meet the required standards, with a few exceptions that need attention. It indicates that the hotel is mostly managing its water quality well, but there are a few areas for improvement, particularly in effluent treatment, where oil and grease must be reduced to meet environmental standards.

4) Soil Contamination

The operation phase of the hotel may have some low-level impacts on the surrounding soil and geology, primarily due to the following factors:

- Fuel and oil leaks from generators and maintenance equipment can lead to soil contamination, affecting soil quality and potentially nearby groundwater.
- Improper waste disposal can contaminate soil, if not properly managed.
- The hotel's extensive use of impermeable surfaces reduces soil permeability, limiting natural water recharge and increasing runoff.

5) Groundwater Consumption

During the operational phase of the hotel, significant groundwater consumption occurs due to various daily activities. One of the primary causes is the high volume of water used in bathrooms and toilets within guest rooms, which leads to continuous and substantial demand. Additionally, water usage for cleaning rooms and laundry operations contributes to overall consumption, especially in large-scale hotel facilities. Kitchen operations further intensify groundwater use due to cooking, washing, and sanitation processes. These combined activities can lead to a decline in the groundwater table, particularly in areas with limited natural recharge capacity. Over-extraction may result in reduced availability of water for local communities, deterioration of water quality, and increased operational costs due to the need for water treatment or alternate sourcing.

6) Electricity consumption

Electricity consumption during the hotel's operation phase is slightly significant and arises from multiple sources. One of the major contributors is the use of air conditioning systems and refrigerators in guest rooms and service areas, which operate for extended hours, especially in warmer climates. Lighting in common areas, rooms, corridors, and function spaces also adds to the overall energy demand, particularly if inefficient lighting systems are used. Additionally, electricity is required to pump water from the underground storage tank to various points of use, further increasing energy consumption. The hotel uses the two out of three backup generators when the electricity is cut off.

7) Waste Generation

The types of solid wastes generated from the hotel can be broadly categorized based on their nature and ultimate disposal method into the following:

- Solid Waste Disposal
- Wastewater Disposal
- Hazardous and non-hazardous waste

During the operation of the hotel, the hotel generates food waste from kitchens and dining areas, which could lead to unpleasant odors, pets, contamination if not properly managed, and miscellaneous wastes such as packaging materials, paper, and plastics. Wastewater from the kitchen, bathrooms, laundry, hotel operation process, toilets, cleaning agents, and generators. Hazardous waste from cleaning agents and other chemicals in the hotel can lead to surrounding hotel areas and nearby drainage systems and water resources. The handling of chemicals and exposure to chemicals used in cleaning and maintenance can pose to the employee's health risk. Wet waste is disposed of in a temporary storage area, and YCDC handles final disposal. Ensuring that this waste is properly segregated and stored to prevent contamination of water or air is crucial.

7.4.2 Biological Environment

1) Biodiversity

Since the Novotel Yangon Max Hotel is currently successfully in operation and the assessment of the biological environment is not pertinent. In addition, the location of the hotel is in the urban residential and commercial area, and does not involve any significant biological resources. Consequently, the following areas of examination and survey are excluded from the scope of this IEE report.

7.4.3 Social Environment

1) Socio-Economic Aspects

The magnitude and duration of the Project are expected to have a positive effect on the socio-economic status. The project will provide substantial employment opportunities for both skilled and unskilled local workers, contributing to the economic growth. The benefits will vary depending on the phase of the project. Based on the socio-economic assessment, no significant negative social impacts have been identified from the hotel.

During the operational phase of the project, the long-term socio-economic impacts are projected to be significantly positive. The project will enhance the local community and its economic and well-being. This includes generating income, providing employment, improving social infrastructure, and enhancing the overall quality of life. No adverse socio-economic impacts are anticipated.

2) Occupational Health and Safety

Occupational health and safety measures are essential during the operational phase of the hotel involving various activities, even though the overall risk is expected to be minimal. However, the risks need to be carefully evaluated and mitigated to ensure a safe and healthy work environment. Employees involved in equipment handling such as maintenance, housekeeping and kitchen staff may be exposed to accidents and injuries from improper use or mishandling of tools and machinery. In addition, the employees are at the risk of exposure to hazardous chemicals used in cleaning, disinfecting, and maintenance activities that can lead to health problems. The infectious disease can spread between staff and guests.

3) Community Health and Safety

The hotel operation activities may affect community health and safety through changes in water quality and availability, energy consumption, traffic safety and increased risk of emergencies. The hotel may contribute to the spread of infectious diseases if proper hygiene and sanitation measures are not implemented. Public health concerns such as the spread of respiratory infections or diseases can impact both guests and the surrounding community.

The hotel requires significant water resources for guest rooms, laundry, kitchen, restaurant, landscaping, public facilities. The increased amount of water usage may impact the surrounding community's water availability. The hotel will be mainly using YCDC water

supply system, with tube wells serving as a backup source. The project will consume large amounts of electricity for various operations. This may impact on the power distribution to the surrounding community and the stability of the power system.

Although the overall vehicle movement at the hotel is generally smooth and well-managed, the Pyay Road can still occur heavily traffic due to its proximity to various commercial businesses, schools, and university. These periods often coincide with check-in and check-out times and event hour at the hotel. Therefore, the hotel should implement a traffic management plan that aligns with peak hours on Pyay Road to avoid disturbing public transportation.

4) Cultural Heritage

Accidental fire outbreak in hotel premises, malfunctioning electrical systems or kitchen operations, improper use of heating and cooling systems, and the storage of flammable materials like cleaning agents or fuel during the operation phase. This can affect to the historical buildings around the project.

5) Fire Hazards

The fire hazards can arise from operational activities such as electrical systems, improper use of heating and cooling systems, and the storage of flammable materials like cleaning agents or fuel during the operation phase. Improper actions by guests, such as smoking in non-smoking areas, can also increase the risk. These fire hazards threaten the safety of guests and staff, as well as the property. Regular inspections, proper maintenance, safe storage of materials, and clear emergency procedures are essential to minimize these risks and ensure safety.

7.5 Potential Impacts During Decommissioning Phase

7.5.1 Physical Environment

1) Air Pollution

During the decommissioning phase, activities such as dismantling structures, equipment, and vehicles can release large amounts of dust and fine particles into the air, which may impact on air quality. Exhaust emissions from equipment and vehicles used for material removal contribute to air pollution and can increase the levels of harmful gases and particulate matter. The burning of debris may release toxic pollutants, posing significant risks to human health and the environment. Additionally, the disposal of residual paints, adhesives, and hazardous materials during decommissioning can lead to the release of harmful pollutants if not properly managed. Proper dust control, emission reduction measures, and safe disposal of hazardous materials are essential to mitigate these air quality impacts.

2) Noise and Vibration

During the hotel decommissioning phase, the breaking down of structures generates loud, disruptive noise that can affect both workers and the surrounding community. The use of demolition machinery, such as excavators, produces significant noise and vibrations, which can be particularly disturbing in urban environments. Heavy machinery and equipment used for

demolition work can also cause ground vibrations, potentially leading to structural damage in nearby buildings. The continuous noise and vibration can negatively impact the quality of life for local residents and workers. Implementing noise control measures, such as using soundproof machinery and scheduling work during off-peak hours, is essential to mitigate these impacts.

3) Water Pollution

Improper disposal of building materials, oil, paints, cleaning agents, and leftover materials can lead to significant water contamination. Oil, paints, and cleaning agents used during dismantling activities can pollute nearby water sources if they are not disposed of properly. Additionally, the removal of infrastructure could disrupt natural water flow, potentially leading to localized flooding. Effective waste management, proper disposal of chemicals, and measures to preserve water flow are necessary to minimize these water-related impacts.

4) Soil Contamination

The disposal of debris and materials, such as asbestos and concrete, can lead to soil contamination. Oil, adhesives, and other hazardous substances may leach into the soil. The use of heavy equipment for demolition and material removal can result in soil compaction, which can reduce soil permeability and disrupt local ecosystems. Additionally, decommissioning activities may expose large areas of bare soil, making it vulnerable to erosion and degradation of its properties. Proper waste management, equipment uses, and soil protection measures are crucial to minimize these impacts on the soil.

5) Waste Generation

Large amounts of demolition waste, including concrete, steel, and glass, are generated, which can contribute to environmental pollution if not properly managed. The demolition process may also release hazardous materials such as asbestos, lead paint, or other chemicals, which require special disposal procedures to prevent harm to human health and the environment. Additionally, the excavation or removal of materials presents risks of soil contamination and water pollution, particularly if hazardous substances are not carefully handled. Proper waste management practices, including the safe disposal of hazardous materials and minimizing waste generation, are essential to mitigate these risks.

7.5.2 Social Environment

1) Socio-Economic Aspects

The project can have both positive and negative socio-economic impacts during the decommissioning phase. On the positive side, job opportunities will be created for dismantling work and site rehabilitation, providing employment to local workers. Balancing the economic benefits of job creation with the need to minimize environmental and social disturbances is crucial to ensuring the overall well-being of the community.

2) Occupational Health and Safety

The use of heavy machinery, cleaning products, and improper site management during the decommissioning phase can affect several occupational health and safety risks. Workers may be exposed to injuries from equipment if proper safety protocols are not followed. A lack of adequate safety measures can increase the risk of accidents and harm to workers. Additionally, exposure to hazardous chemicals used in cleaning and maintenance activities may result in health issues, such as skin irritation or respiratory problems. Emission gases and dust generated from demolition activities can cause respiratory health problems for workers if they are not properly protected. Implementing strict safety measures, providing appropriate protective equipment, and ensuring proper site management are essential to safeguard workers' health and safety.

3) Community Health and Safety

Noise and dust from the decommissioning process can disturb the surrounding community, affecting their quality of life. The waste generated from demolition activities may disturb local disposal facilities and resources.

4) Cultural Heritage

The demolition activities can generate vibrations that may affect nearby historic structures, or subsurface archaeological layers. Accidental deposition of debris on historical sites from the demolition process could be improperly handled, leading to accidental deposition on nearby historical sites. Therefore, this can affect to the historical buildings around the project.

5) Fire Hazards

Fire hazards may arise due to flammable debris and inadequate disposal of leftover materials. Flammable debris, including leftover chemicals from the operational phase, can affect significant risk to demolition workers and the surrounding community, especially if not properly managed. Inadequate disposal of hazardous materials, such as oils, paints, or solvents, can increase the risk of fires breaking out, potentially spreading to nearby residents and communities.

CHAPTER 8 RESULTS OF THE PUBLIC CONSULTATION

8.1 Public Participation Processes

The objectives of the consultation should be adapted to the project context and be clearly defined in the EMP. EIA procedures stipulate that the people affected by the project and other stakeholders should participate in the discussions on the implementation of the environmental and social activities, as well as the EMP of the investment project. The people affected by the project and other stakeholders have the right and duty to make a written proposal to resolve the environmental and social problems caused by the investment project to the local administrations, at each level, or directly to MOECAF, in case the problems have not yet been resolved.

The consultation process during the construction, operation and decommissioning/closure/post closure phases should focus on the major residual impacts on the affected people. The objectives of the consultations will be to minimise these residual impacts to an acceptable level. In the same time, the project proponent should enhance the positive impacts of the project, particularly regarding the affected people in terms of employment, local development, and health and safety.

8.2 Outline of Public Consultation Meeting

Public participation should be considered as the required element of the IEE process. In fulfilment of the public consultation and disclosure obligation for the project, the proponent invited governmental officials and local community near the project site and the public consultation meeting were held at Novotel Yangon Max Hotel, Bagan Ballroom, on May 21, 2025. The number of attendances in the meeting is briefly shown in Table 8-1.

It is aimed at disclosing the findings of environmental and social studies and the likely impacts upon them as well as mitigation and monitoring schemes to remediate the impacts caused by the project activities. The impacts were studied for all activities to be carried out operation phase. It is also aimed at receiving public recommendations, feedbacks upon the studies. All feedbacks from public consultation meetings will be addressed and considered in the formulation of EMP and environmental monitoring plan.

Table 8-1Attendance Lists of Public Consultation

No.	Category	Number of Participants (Person)
1	Government Officers	8
2	Private Company	1
3	Local People	5
	Non-Government Organization	6
Total		**20**

Public Consultation Meeting Activities

Public Consultation Meeting of the Initial Environmental Examination (IEE) for Novotel Yangon Max Hotel Project implemented by Max (Myanmar) Hotel Co., Ltd. in Novotel Yangon Max Hotel, Bagan Ballroom was conducted in accordance with the following agenda.

1. Opening Ceremony
2. Opening Remark and presentation of project description and information of Novotel Yangon Max hotel project by Daw Aye Thet Paing, Director of Max Myanmar Hotel Co., Ltd. and presentation of the engineering aspects of the project by U Khin Maung Myint, Director of Engineering
3. Presentation of the Initial Environmental Examination for the project by U Soe Min (Environmental Advisor, E Guard Environmental Services)
4. Questions, and Recommendations from Attendees
5. Closing Ceremony

Agenda (1) Opening Ceremony

Public Consultation Meeting of the Initial Environmental Examination (IEE) prepared for the Novotel Yangon Max Hotel Project implemented by Max (Myanmar) Hotel Co., Ltd. in Novotel Yangon Max Hotel, Bagan Ballroom was held as per the agenda.

Agenda (2) Opening Remark and presentation of project description of by Daw Aye Thet Paing, Director of Max Myanmar Hotel Co., Ltd. and presentation of Engineering aspects by U Khin Maung Myint, Director of Engineering

According to the above Agenda, Daw Aye Thet Paing, Director of Novotel Yangon Max Hotel, delivered opening remark and presented about the project description. She stated that the Max (Myanmar) Hotel Cp., Ltd. currently operates a total of three hotels; Novotel Yangon Max Hotel, M Gallery Sophitel in Nay Pyi Taw and Hotel Max Nay Pyi Taw. The company have been licensed and operating since 2006. Among them, Novotel Yangon Max Hotel began operation in 2015. The hotel comprises 366 rooms and 5 restaurants, 2 bars, swimming pool, fitness centre, boxing centre, tennis court and other variety of services. It was stated during the opening remarks that the company is now collaborating with E Guard Environmental Services to prepare the Initial Environmental Examination (IEE) report.

Hotel received the business license on January 5, 2006 and officially opened Novotel Yangon Max Hotel in 2015. The development is with an investment of USD 23 million and the hotel operates as a Private Company Limited by shares, under a 15-year agreement. The hotel is constructed on the land area of 3.295 acres. After the initial introduction, the presentation continued with an overview of the structural layout, building types and the room categories.

Subsequently, U Khin Maung Myint, the Director of Engineering, was invited to continue the presentation, focusing on the engineering aspects of the project. U Khin Maung Myint provided a detail explanation of the materials and resources used in operation. The electricity consumption is about 750,000 units per month. However, during the periods of power outages, usage drops to between 300,000 and 400,000 units per month. There have three generators, each with a capacity of 1,660 kVA, although only two are used under normal conditions. In terms of fuel usage, each generator consumes approximately 350 litre per hour per month and

a total of about 3,600 gallons of diesel is stored. As for water resources, the hotel primarily utilizes three deep wells, each about 360 feet deep supplying a combined monthly consumption of approximately 1,650,000 gallons. During construction, instructions were placed to use YCDC water supply if necessary. The water is treated before use through a multi-stage purification process including sand filtration, carbon filtration, and cartridge filtration.

Concerning waste management, waste is categorized into organic waste, dry waste and recyclable materials. Daily waste collection is carried out by YCDC. Dry waste is separately stored in air-conditioned rooms, while recyclables are sold for reuse. As for wastewater treatment, the facility can process 300m^3 per day before discharging into the municipal drainage system. YCDC conducts regular inspections, and wastewater samples are tested in laboratories monthly. If necessary, additional purification measures are undertaken.

Following this, Daw Aye Thet Paing presented the CSR initiatives carried out by the company. These include donations for education, healthcare and emergency relief for natural disaster victims. Employees also benefit from monthly provisions such as food supplies and healthcare support. Regular training sessions are conducted for relevant departments and high-performing staff are offered overseas training opportunities. Employees also have access to a complimentary gym facility.

Lastly, U Khin Maung Myint discussed fire safety measures. The hotel is equipped with an automatic sprinkler system in the kitchen, alert and alarm systems on each floor, 106 fire hydrants, 7 fire hose reel and 336 fire extinguishers placed throughout the premises and also described the emergency preparedness and response plans, which are regularly reinforced through monthly fire safety training conducted by the Fire Safety Manager.

Agenda (3) Presentation of the Initial Environmental Examination for the project by U Soe Min (Environmental Advisor, E Guard Environmental Services)

According to the Agenda 3, U Soe Min, the Environmental Advisor from E Guard Environmental Services, presented the Initial Environmental Examination (IEE) process for the project. The advisor began by outlining the step-by-step procedures involved in conducting an IEE, explaining that according to environmental conservation laws, any project must be carefully assessed to avoid and mitigate adverse impacts on both the natural environment and the socio-economic conditions of nearby communities.

The advisor explained that the assessment involves collecting detailed project information and evaluating the potential environmental and social impacts. This process includes field inspections in areas surrounding the project site, identification of possible risks, and the organization of public consultations to gather community feedback. Based on these findings, the IEE report is prepared and submitted to the Environmental Conservation Department (ECD) for review. Following this, the advisor explained the steps required for submitting the report and noted that once the Environmental Compliance Certificate (ECC) is approved, the project proponent is required to submit environmental monitoring reports every six months. Then continued by explaining in detail how the IEE report is compiled as part of the overall assessment process.

Agenda (4) Questions, and Recommendations from Attendees

Table 8-2 Record of Questions, and Recommendations of Public Consultation Meeting

No	Questioner	Questions and Recommendations	Respondent	Answers and explanations
1	U Khin Maung Myint (Director of Engineering) (Max (Myanmar) Hotel Co., Ltd.)	The questioner inquired that if the approval of IEE is a mandatory requirement to acquire a business license when starting a new business.	U Soe Min (Diector) (E Guard Environmental Services) U Kyaw Kyaw (Deputy Chief Officer) (Environmental Conservation Department, Yangon)	It was explained that when initiating a new business, an application must first be submitted to the relevant authorities. Only after receiving official approval can require theenvironmental assessment whether EIA, IEE or EMP be carried out. In the case of hotel expansion, such as adding guest rooms or parking area, a separate application must be submitted to the Environmental Conservation Department. He also supplemented that if they want to expand business, a proposal must be submitted to the office.
2	U Kyaw Kyaw (Environmental Conservation Department, Yangon)	Although it was stated that wastewater had been treated before discharge, the reason why oil and grease and Total suspended solid (TSS) exceeded the guidelines limits was questioned.	U Soe Min (Diector) (E Guard Environmental Services)	The treated wastewater is discharged into the storm water drainage and the measurement were taken at that drainage point. It can be assumed that the combine effluent form the sewer also discharge through that drainage channel. It is possible that oil spills form vehicles in the hotel compound as well as dust and particles from the external sources, may have entered the drainage system. It was also noted that the original drainage channel itself may be contaminated. The discharge point of the wastewater will be further inspected, and the findings will be reported accordingly. Although diluted samples may show reduced pollution levels during testing, it was clarified that this method does not constitute a valid solution. Future measurements will be reported, and actions will be taken to reduce any parameters that exceed the prescribed standards.

Agenda (5). Closing Ceremony

According to Agenda (5), the Public Consultation of the Initial Environmental Examination (IEE) for the Novotel Yangon Max Hotel Project implemented by Max (Myanmar) Hotel Co., Ltd. in Novotel Yangon Max Hotel, Bagan Ballroom was closed.

Figure 8-1Record Photos







Registration of representatives from the Ministries




Registration of representatives from Administrators, Local People, Private Company and IGO/INGO

Opening Remark by Director
Daw Aye Thet Paing,
Max (Myanmar) Hotel Co., Ltd.

Presentation of Project Information by Director Daw Aye Thet Paing,
Max (Myanmar) Hotel Co., Ltd.

Presentation of Engineering Aspects of project by U Khin Maung Myint, Director of Engineering
Max (Myanmar)Hotel Co., Ltd.

Presentation of the process of IEE Report by Director U Soe Min
(E Guard Environmental Services)




Question and Discussion Session




Opinion and Suggestion from Attendees

Agenda (5) Closing Ceremony

According to Agenda 7, the Public Consultation of the Initial Environmental Examination (IEE) for the Novotel Yangon Mac Hotel Project implemented by Max (Myanmar) Hotel Co., Ltd. in Novotel Yangon Max Hotel (Bagan Ballroom), was closed.

8.3Feedback and Comments of the Local People

The project owner has the responsibility to make sure that every stakeholder could raise their voices related to the opinions and relationships on the development of the project during the impact assessment (EIA Procedure, 2015). The project proponent should consider every feedback of the local people during the whole lifespan of the project as opinions on the development of the project are important for the successful operation of the project.

Methodology

The study team prepared the feedback form to collect the feedback of the local people living in the vicinity of the project area. Well-prepared forms to collect the feedback were distributed to the local people who attended the public consultation meeting held at the project site on May 21, 2025. It is requested to fill in the feedback form after the stakeholders meeting and return to the E Guard team after filling up by the respondents. The feedback form is composed of the following information related to the personal data of the attendees, estimated impacts of the project, opinions of the local people on the project, and suggestions given by the locals to the project proponent.

Table 8-3 Description and parameters of feedback form

Sr.	Description	Parameters
1	Profile of the respondent	Age, gender, address, phone number, occupation
2	Opinions on the project	Impacts, opinions and suggestions to the project proponent

Source: E Guard Study Team

Results of Feedback Survey

The results of the feedback survey carried out after the public consultation held on May 21, 2025 for this project were summarized in the following table.

Table 8-4 Profile of respondents and summary of feedbacks

Sr.	Name	Age	Gender	Address	Occupation	Positive Impacts	Negative Impacts	Opinions on Project	Environmental and Social Suggestions
1	Respondent 1	36	Female	GAD Staff Housing, No (6) Ward, Kamayut Township	No answer	I believe it will develop a beautiful, pleasant and healthy environment.	No answer	The project is a good one.	I would like to develop a systematic project that causes minimal harm to the environment.
2	Respondent 2	70	Female	Yangon University, Kamayut Township	Social Assistance Association	The project can give/offer job opportunities.	We must protect the environment from project.	The project is a good one.	I would like to suggest the project owner protect the environment carefully and carry it out in a clean way.
3	Respondent 3	62	Male	Yunlong Hanthawaddy Golf Association, Kamayut	Manager	No answer	No answer	No answer	No answer
4	Respondent 4	54	Male	Kamayut Township	Merchant	Young people can get job opportunities	I think to protect the natural environment with special attention and care.	It is a good project.	I would like to suggest to the project owner to give special care to avoid damaging the environment and to take special care in keeping the air and water clean, to make special efforts to ensure structural strength while minimizing the environmental impact.
5	Respondent 5	35	Male	Tha Hton Street, No (9) Ward, Kamayut Township	Government staff	Job opportunities are available due to the project.	Noise	It's good if everything goes well.	I would like to suggest the project owner to study the environment

Sr.	Name	Age	Gender	Address	Occupation	Positive Impacts	Negative Impacts	Opinions on Project	Environmental and Social Suggestions
									and the construction environment. If the surrounding area of the project site is not affected, e everything will be fine
6	Respondent 6	59	Female	Kamayut Township	Government Staff	Job opportunities are available.	There is no negative impact.	It is a good project.	I would like to suggest continuing the environmental measurement and keep up the good results and conduct the public consultation like today's meeting.
7	Respondent 7	27	Male	Mingalar Taung Nyunt Township	Government Staff	Job opportunities are available due to the project.	Wastes	It is a good project.	I would like to suggest complying with the requirements and guidelines of the IEE.
8	Respondent 8	29	Male	Botahtaung Township	Government Staff	Job opportunities are available due to the project.	If there is no proper vehicle entry and exit system, traffic congestion may occur.	It is a good project.	No answer.
9	Respondent 9	29	Male	Kamayut Fire Station	Government Staff	Storing details results step by step through the service is very useful for environmental conservation.	Environmental impacts may occur, but proper mitigation may reduce them.	We can know how the hotel reduces harm to the environment.	I would like to suggest the owner continue reducing environmental impact.

Sr.	Name	Age	Gender	Address	Occupation	Positive Impacts	Negative Impacts	Opinions on Project	Environmental and Social Suggestions
10	Respondent 10	45	Female	Insein Township	Government Staff	Job opportunities are available for residents.	There is no negative impact.	It is a good project.	No answer.
11	Respondent 11	50	Male	University's Hospital Campus	Driver	I am proud of this project.	There is no negative impact.	It is a good project.	No answer.
12	Respondent 12	54	Male	Kamayut Township	Engineer	The project can give benefits for local society, environment and health.	There is no negative impact.	It is a good project.	No answer
13	Respondent 13	57	Male	Kamayut Township	No answer	I think starting now will bring benefits.	No answer	It is a good project.	Please invite more locals to future public consultations.
14	Respondent 15	40	-	Kamayut Township	No answer	Everything is good.	No answer	No answer	No answer
15	Respondent 16	63	Male	Kamayut Township	Administrator	Employment and health opportunities can be improved.	The project can cause traffic jams and sometimes noise.	I think environmental conservation should be done.	Efforts should be made to widely inform the public. Qualified project implementers need to be developed.
16	Respondent 17	59	Female	Yankin Township	Government Staff	By consulting with the public and through their active participation opportunities for conducting business can be obtained.	Noise and poor air quality should be checked in the project as much as possible.	The project has been probably implemented by the relevant organization.	Environmental impacts must be minimized as much as possible. Ways to prevent and reduce negative impacts should be found as much as possible.

Sr.	Name	Age	Gender	Address	Occupation	Positive Impacts	Negative Impacts	Opinions on Project	Environmental and Social Suggestions
17	Respondent18	70	Male	Kamayut Township	Administrator	Job opportunities are available due to the project.	There can be no side effects due to the project.	It is a good project.	It should be carried out in a way that does not harm the environment. There are no specific suggestions.
18	Respondent19	69	Male	Pyiyatemon No. (7) Ward, Kamayut Township	Administrator	I think the project can develop the local environment.	No answer	The project can effectively contribute to the development of the country.	I would like to implement with modern technology, to implement social and environmental development projects and implement the project with high quality.

Source: E Guard Study Team (May 2025)

Most of the respondents (50%) think that the project can offer job opportunities while (30%) of the respondents think that the project can give benefits and create a beautiful environment. Around one-fourth of respondents think that the project has not any adverse effects while a mere (11%) think that the project can contribute noise pollution in the local area and traffic congestion if there is no systematic traffic management. Around (68%) of the respondents think that it is a good project. Most respondents (42%) suggest the project owner to conserve the environment without any impact on the environment. Some of the rest of the respondents suggest the project owner apply high technology, follow the guidelines and monitor the environmental parameters. Around (16%) of the respondents suggest inviting more local people in upcoming public consultation meetings if any and a mere (1%) of the respondents give suggestions to help the local community and not to harm them.

8.4 Disclosure of the IEE Report

This Initial Environmental Examination (IEE) report is submitted to the Environmental Conservation Department (ECD) by Max (Myanmar) Hotel Co., Ltd. as part of its commitment to environmental transparency. It states: "Once the IEE report has been submitted to ECD, Max (Myanmar) Hotel Co., Ltd. plans to make it available to interested parties and the general public within two weeks of its submission. The report will be accessible at Max (Myanmar) Hotel Co., Ltd. office, website and E Guard Environmental Services' website.

In accordance with this statement and Article 38 of the Environmental Impact Assessment (EIA) Procedure (2015), Max (Myanmar) Hotel Co., Ltd. has disclosed the IEE report to the public. This ensures that civil society, project-affected persons (PAPs), local communities, and other relevant stakeholders have the opportunity to review and understand the report. The report includes information on the expected environmental impacts of the project, as well as the Environmental Management Plan (EMP) that will be implemented to mitigate these impacts.

This Initial Environmental Examination developed for Novotel Yangon Max Hotel Project of Max (Myanmar) Hotel Co., Ltd. can be download and read in the following link.

www.eguardservices.com

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CHAPTER 9 DESCRIPTION OF PROPOSED MITIGATION MEASURES

Introduction

This section outlines the necessary mitigation measures to minimize and reduce the impacts on the physical, biological, social and natural environment associated with the activities of operation and decommissioning phase.

9.1 Potential Impacts Mitigation Measures During Operation Phase

9.1.1 Mitigation measures of Physical Environment

1) Air Quality

To minimize the impact on air quality, the following measures will be implemented:

- Implement traffic management practices to minimize congestion and emissions near the hotel entrance.
- Install systems that use less energy and emit fewer pollutants.
- Perform regular maintenance on generators, ventilation systems, air conditioning systems, and kitchen equipment to ensure efficient operation and minimal emissions.
- Use non-toxic cleaning products, low-emission paints, and other sustainable materials to reduce harmful emissions.
- Install soundproof barriers or plant trees, especially on the side of the hotel facing the construction site.
- The hotel should maintain and inspect all air conditioning units regularly to prevent leakage of refrigerants, and ensure that only equipment with non-ozone depleting substances refrigerant and air conditioning are installed and used.
- Refrigerants must be properly recovered and disposed of by certified technicians to prevent the release of ozone depleting substances into the atmosphere, following environmental safety guidelines and regulations.

2) Noise and vibration

To minimize the impact of noise and vibration, the following mitigation measures will be implemented:

- Install sound barriers and trees fences along driveways and parking areas to help absorb and reduce noise dispersion.
- Use modern systems designed to operate quietly, minimizing low-frequency noise.
- Set noise level limits and restrict the duration of events, particularly in the evening and nighttime, to reduce disturbance.
- Educate guests on noise reduction policies in common areas to help maintain a peaceful environment.

These measures will help ensure that the hotel's noise and vibration impacts remain low while maintaining a comfortable environment for both guests and the surrounding community.

3) Water Quality

To reduce the impact on water quality, the following measures will be implemented:

- The hotel already uses environmentally friendly technologies for wastewater management, including raw water treatment and wastewater treatment systems to ensure effluents are treated before being discharged into water bodies.
- Implement regular maintain systems of wastewater treatment plant not to discharged more than limited guideline standards.
- Install and regular maintenance of oil and grease traps in both hotel kitchens to capture oils and fats.
- Implement a waste management system that includes segregation, recycling, and proper disposal of all waste, with wet waste generated by the hotel being collected by YCDC for final disposal.
- Reduce water consumption, install low-flow taps, showerheads, and dual-flush toilets in guest rooms and public areas.
- Vegetated rain gardens to minimize polluted runoff will be planted around the property to filter and slow down surface runoff.
- Chemicals should be stored in a secure environment to prevent leaks or spills.

These measures, along with the ongoing use of environmentally friendly technologies, will ensure minimal impact on local water quality, and the sustainable use of water resources.

4) Soil contamination

To minimize the impact on soil and geology, the following mitigation measures should implement:

- Install spill containment systems, under generators and fuel storage areas to capture any leaks or spills.
- Develop a comprehensive waste management plan, including segregation, recycling, and disposal of all waste types in compliance with local regulations.
- To improve soil permeability and reduce runoff, landscape areas may be created with native plants. While most areas are covered by impermeable surfaces, strategic planting can help support natural water recharge.
- Wastewater drainage systems will continue to be maintained, ensuring that effluent is properly managed to prevent soil contamination.

5) Groundwater Consumption

To minimize and mitigate the impacts by over consumption of groundwater the following mitigation measures should implemented:

- Install water-efficient fixtures and fittings in bathrooms and toilets (e.g., dual-flush toilets, low-flow showerheads and faucets).
- Implement a linen and towel reuse program to reduce the frequency of laundry operations.
- Use high-efficiency washing machines and commercial dishwashers that minimize water consumption.
- Train hotel staff on water conservation practices for cleaning and maintenance routines.
- Monitor and record daily water usage to identify high-consumption areas and take corrective actions.
- Recycle greywater (from showers and sinks) for use in toilet systems where regulations permit.

6) Electricity Consumption

To minimize the impacts, the following mitigation measures should implement:

- Install energy-efficient air conditioning units and refrigerators according to star ratings.
- Use LED lighting and motion sensors to reduce energy consumption in low-occupancy areas.
- Implement smart room controls that automatically adjust lighting and temperature based on occupancy.
- Regularly maintain and service electrical appliances and HVAC systems to ensure optimal performance.
- Install solar panels or other renewable energy sources to partially offset electricity demand.
- Optimize the water pumping system with energy-efficient motors and control timers.
- Educate staff and guests on energy-saving practices, including switching off appliances when not in use.
- Monitor and analyse electricity usage patterns to identify inefficiencies and apply targeted improvements.

7) Waste Generation

Waste disposal areas are provided within the project area during the operational stage. Collection is carried out once every two days since accumulated wastes at the hotel premises may pose a health risk and nuisance to the occupants within the project area as well as visitors/guests. A waste separation system is implementing within the hotel and waste recycling be considered in line with good practices for the hotel.

- Implement a waste segregation system to separate food waste, recyclables, hazardous and non-hazardous waste.

- Training staff to segregate waste correctly and provide clear signage to dispose of waste.
- Use covered and sealed bins to prevent unpleasant odors and pests.
- Coordinate with YCDC for proper disposal of all solid waste.
- Maintain a wastewater treatment system to ensure proper treatment before discharge into local drainage systems.
- Conduct regular inspections and maintenance of plumbing and wastewater systems to avoid leaks or contamination.
- Ensure compliance with local environmental regulations for wastewater discharge.
- Training staff to handle, and usage carefully and storage of cleaning agents and hazardous chemicals.
- Cleaning agents stored carefully in the redesignated areas and secure areas with proper labelling.
- Dispose of hazardous waste through authorized and certified waste disposal services.
- Reduce waste generation by eco-friendly and reusable products in hotel operations.
- Establish the recycling program for paper, plastics, and other recyclable materials.
- Encourage guests to participate in waste reduction practices through awareness initiatives and signage.

Ensure that the temporary waste storage area is clean, well-ventilated, and sealed to prevent any potential leakage or contamination.

9.1.2 Mitigation measure for Social Environment

1) Socio-economic Aspects

The socio-economic assessment has not identified any significant adverse social impacts associated with the hotel project. The hotel should prioritize creating job opportunities for local communities, including both skilled and unskilled workers, to enhance local employment rates. Efficient use of water and electricity is essential to minimize the strain on local resources and ensure sustainable operations. The materials and services should be sourced from local suppliers, thereby contributing to the growth of the local economy. These measures collectively support socio-economic growth while fostering positive relationships with the surrounding community.

2) Community health and safety

The following mitigation measures can mitigate the impacts on community health and safety:

- Maintain high hygiene standards in all hotel operations, including proper sanitation measures in guest rooms, kitchens, and public facilities.
- Implement regular health care for staff and provide training on hygiene and disease prevention.
- Install water-saving technologies such as low-flow faucets, dual flush toilets, and water efficient laundry systems.
- Regular inspect and monitor the water usage to ensure efficiency.

- Use energy efficient appliances and systems to reduce the consumption of electricity.
- Conduct regular maintenance of electrical systems to avoid energy wastage and reduce electrical shocks.
- Implement a comprehensive emergency response plan.
- Equip the hotel with adequate firefighting equipment, emergency alarms, and clearly marked emergency exit routes.
- Conduct regular emergency drills for both staff and guests and coordinate with local authorities.
- Design clear entrance and exit points for vehicles.
- Schedule hotel supply deliveries and waste collection during non-peak hours to reduce road congestion.
- Promote alternative transportation options for guests to minimize the impact of other vehicles and public transportation.

3) Occupational health and safety

The following are need to mitigate for the occupational health and safety.

- Establish emergency response plans and train staff on how to manage equipment-related accidents.
- Conduct regular checks of equipment, machinery and electrical systems to ensure properly and safely functions.
- Ensure adequate ventilation in areas such as kitchen, laundry, and cleaning rooms to minimize respiratory risk.
- Provide staff regular training on the safe handling, storage, and disposal of chemicals, as well as proper first aid procedures in case of exposure.
- Provide clean and well-maintained hygiene facilities, including handwashing stations and sanitizers.
- Conduct regular health care for employees to detect and manage potential illnesses.
- Ensure all staff have access to medical services, including first aid and regular health checkups.
- Conduct regular basic first aid training for employees to enhance their ability to respond effectively to workplace injuries and emergencies.
- Implement the emergency response plan for accidents, chemical exposure, and infectious disease outbreaks.
- Implement a comprehensive occupational health and safety management plan to minimize and reduce the risks and health for employees and guests.
- Earthquakes, in particular, cannot be predicted in advance, so it is important to carry out preparedness actions and regularly training.

4) Cultural Heritage

The following mitigation measures can mitigate the impacts on cultural heritage:

- Install advanced fire prevention systems (such as automatic sprinklers and smoke detectors) throughout the hotel.
- Conduct regular fire drills and maintenance checks on electrical systems to prevent malfunctions.
- Provide fire safety training to staff, ensuring they are equipped to respond immediately to any fire-related emergencies.

5) Fire Hazards

The following are need to mitigate for the occupational health and safety.

- Conduct regular inspections and maintenance of all electrical systems, including wiring, lighting, and appliances to reduce the risk of shocks.
- Ensure regular servicing and maintenance of heating, ventilation and air conditioning systems to prevent overheating and error in function.
- Store flammable materials, including cleaning agents and fuel, in well-ventilated, and designated areas.
- Provide employees with regular training on the proper handling, storage and disposal of hazardous chemicals to prevent accidental fires.
- Clearly mark no smoking areas especially in guest rooms and public spaces.
- Install and regularly fire systems, including sprinklers, fire extinguishers, and alarms, throughout the hotel to respond to potential fires.
- Develop and regularly emergency preparedness such as drills to ensure response to emergencies occurs.
- Train hotel staff in fire safety including how to use fire extinguishers, the proper response to fire alarms, and how to assist guests.
- Display emergency contact numbers prominently throughout the site in case of fire or other emergencies.
- Implement comprehensive emergency preparedness and response management plans to reduce risks and emergencies for employees and guests.

9.2 Potential Impacts Mitigation Measures During Decommissioning Phase

9.2.1 Mitigation measures of Physical Environment

1) Air Quality

To minimize the impact of air quality, the following mitigation measures will be implemented:

- Regularly water spraying demolition sites, roads and pathways to prevent the dust and fine particles.
- Use dust barriers around demolition areas to prevent particles from drifting into nearby areas.
- Regularly maintain construction equipment and vehicles to ensure and do not emit excess exhaust.
- Use low-emission machinery and vehicles to reduce exhaust fumes and particulate matters released into the air.

- Limit the vehicle movement to designated routes and areas.
- Store hazardous materials in sealed containers to prevent accidental release of harmful pollutants.
- Avoid open burning of demolition debris to prevent the release of toxic gases and pollutants.
- Conduct regular air quality assessments to detect the levels of particulate matter, dust and harmful gases.
- Ensure all workers are equipped with suitable PPE.
- Conduct regular training for workers to raise awareness about the risks of pollutants and dust.

2) Noise and Vibration

For noise and vibration, the following measures should be implemented.

- Utilize modern machinery and vehicles thar are designed to minimize noise levels.
- Regular maintenance of all machinery to ensure the operating efficiently and reduce noise emissions.
- Install temporary noise barriers to reduce the transmission of noise into surrounding environments.
- Use a combination of landscaping and soundproof fencing to buffer noise and reduce visual disturbance.
- Provide prior notification to local residents about the schedule of noisy demolition activities.
- Provide workers with adequate hearing protection such as earmuffs or earplugs to protect them from prolonged exposure to high noise levels.

3) Water Quality

To minimize the impact of water quality, the following mitigation measures will be implemented:

- Ensure all hazardous materials and cleaning agents should be stored in a designated and secure container to prevent leaks and spills.
- Transport hazardous waste to certified disposal facilities that specialize in handling chemicals.
- Install spill containment systems around storage areas for chemicals and fuel to prevent any accidental discharge into the surrounding environment.
- Ensure drainage systems are properly maintained to prevent localized flooding.
- Conduct regular water quality assessment at nearby water sources such as groundwater during demolition activities to ensure within the acceptable limits for water standards.
- Use environmentally friendly, non-toxic alternatives to chemicals to reduce the potential water contamination.
- Reduce the generation waste by promoting recycling and reusing materials from the demolition process.

4) Soil Contamination

The following are need to mitigate for the soil contamination impact of demolition activities:

- Ensure the proper segregation of hazardous materials during demolition activities.
- Implement erosion control techniques such as silt fences, or geotextile fabric around areas of exposed soil to prevent runoff and soil erosion.
- Replanting the demolition site by native plants and grasses to stabilize and improve soil structure to enhance soil permeability.
- Regularly inspected and maintained the heavy machinery to prevent leaks or spills of oils, fuels or other hazardous substances.

5) Waste generation

The following are need to mitigate the impacts of waste generation on the environment:

- Identify all demolition waste in each category such as hazardous and non- hazardous materials that require specialized handling and disposal methods.
- Implement proper segregation practices on-site, with designated containers for different types of waste.
- Provide training to workers for safe handling and disposal of materials to minimize exposure to them and the surrounding environment.
- Engage certified hazardous waste disposal company for safe disposal of hazardous materials.
- Establish recycling programs and appropriate recycling facilities to reduce waste generation.
- Conduct regular inspections of waste generated to ensure compliance with waste management and to identify the reduced waste generation.

9.2.2 Mitigation measures of potential impacts on Social Environment

1) Socio-economic aspects

- Ensure the economic benefits of job creation directly support the surrounding community, improving local livelihoods and promoting economic growth.
- Provide on job training for workers to enhance their skills.

2) Occupational Health and Safety

The following are need to mitigate for the occupational health and safety.

- Provide safety training for all workers to proper use of machinery, handling of hazardous materials.
- Ensure first aid kit and emergency response for workers in case of any accidents or health emergencies on-site.
- Provide regular health care and clinic for workers.
- Equip all workers with appropriate personal protective equipment (PPE) and regularly inspected and replaced when necessary to ensure its effectiveness.

- Ensure heavy machinery and equipment are regularly maintained, inspected and operated to prevent accidents and risks and dust and gas emissions.
- Provide clear emergency procedures for fire, chemical spills and other accidents.
- Conduce regular emergency drills to ensure workers are prepared for various scenarios.
- Implement and provide as the occupational health and safety plan.
- The hotel should also display clear and visible safety instructions on walls to inform guests about what to do in case of emergency.
- Earthquakes, in particular, cannot be predicted in advance, so it is important to carry out preparedness actions and regularly training

3) Community Health and Safety

For community health and safety, the following measures should be implemented.

- Implement noise reduction measures such as using soundproof machinery, equipment and install noise barriers to avoid noise to workers and surrounding areas.
- Ensure the site cleaning to reduce the spread of dust and debris to surrounding areas.
- Ensure wastes are segregated into recyclable and non-recyclable categories and disposed of responsibly.
- Establish a grievance mechanism that allows residents and the local community to report any concerns related to the project.
- Schedule the heavy traffic movement during non-peak hours to minimize disruption to local roads and public transportation systems.

4) Cultural Heritage

The following measures should be implemented for the cultural heritage:

- Use controlled, low-impact demolition methods to prevent excessive vibration.
- Install temporary barriers to reduce vibration travel to nearby areas.
- Designate disposal routes far from historical buildings.
- Ensure that staff are trained to follow protection protocols.

5) Fire Hazards

The following mitigation measures are need to implement for fire hazards:

- Ensure all flammable debris, chemicals, and materials are segregated and stored safely in designated away from heat sources.
- Implement waste management plan that includes safe handling and disposal of hazardous materials to reduce fire risks.
- Conduct regular inspections of the decommissioning site to check and taken action to any identified risks.
- Provide workers with regular training on the safe handling storage, and disposal of hazardous materials to prevent fire hazards.
- Prohibit smoking areas around hazardous material and chemical storage areas.

- Ensure fire extinguishers and portable fire suppression systems for emergency response.
- Ensure access to fire hydrants and hose reels for quick response in case of a fire outbreak and maintain these systems to ensure they are operational at all times during decommissioning.
- Establish clear emergency preparedness procedures and plan to prevent and reduce risks.
- Conduct regular emergency drills to ensure response emergency occurs.
- Display emergency contact numbers prominently throughout the site in case of fire or other emergencies.

CHAPTER 10 INSTITUTIONAL REQUIREMENTS AND ENVIRONMENTAL MANAGEMENT PLAN

10.1 Introduction

This chapter describes the Environment Management Plan and focuses on direct impacts, which defines mitigation and monitoring measures and describes the institutions, responsibilities and mechanisms to monitor and ensure compliance with Myanmar Environmental Policy. Such institutions and mechanisms shall seek to ensure continuous improvement of environmental protection activities during operation and decommissioning phases of the project in order to prevent, reduce, or mitigate adverse impacts.

Specific measures are developed in relation to the operation and decommissioning phases of the project proponent and the impacts identified in relation to physical, biological, cultural and socio-economic resources.

10.1.1 Scope of the Environmental Management Plan (EMP)

The Environmental Management Plan (EMP) for Novotel Yangon Max Hotel provides a comprehensive framework for managing and mitigating environmental impacts associated with the operations. It encompasses all activities related to resource consumption, waste management, pollution control, and sustainability initiatives. The scope of the EMP includes the following key areas:

1) Ensuring adherence to national and international environmental laws, regulations, and industry standards.
2) Implementing strategies for solid and liquid waste, including food waste, plastic waste reduction, and proper disposal of hazardous materials.
3) Enhancing water efficiency through conservation measures, wastewater treatment, and the operation of water purification systems to reduce plastic waste.
4) Promoting energy-saving initiatives such as LED lighting, renewable energy integration, and optimized HVAC systems to minimize the carbon footprint.
5) Managing air, noise, and water pollution by implementing best practices for emissions reduction and proper disposal of effluents.
6) Encouraging the use of eco-friendly products, biodegradable materials, and locally sourced supplies to support sustainability.
7) Raising awareness and involving employees, guests, and the local community in sustainable practices through training and engagement programs.
8) Developing response strategies for environmental hazards such as spills, fires, and extreme weather events.
9) Establishing environmental performance monitoring systems.

10.1.2 Objectives of the EMP

The objectives of the Environmental Management Plan are:

1) As a reference and commitment for the proponent to implement the IEE in the phases of the project life cycle, operation, and decommissioning phases of the project.
2) It will fulfill the needs of the Environmental Conservation Department of the Ministry of Natural Resources and Environmental Conservation (MONREC).
3) Serve as a guiding document for the monitoring of environmental and social activities of the project.
4) Provide a detailed framework to mitigate negative impacts on the environment and management actions to be adopted for proper implementation of the project.

10.1.3 Responsibilities of Implementation of EMP for Compliance

In order to effectively implement the project, it will be necessary to define the responsibility of various stakeholders. The environmental management activities should comply with the existing environmental policy, laws, rules, procedures, and emission standards of the Republic of the Union of Myanmar. The following entities are responsible for the implementation of the project;

- Max (Myanmar) Hotel Company Limited
- Environmental Conservation Department
- Third-party Environmental Consultant Firm

Max (Myanmar) Hotel Company Limited

The proponent is responsible for ensuring that the performances of project activities are by the Environmental Management Plan developed and in an environmentally sound manner.

According to the Environmental Impact Assessment Procedure (2015), clause 103, it is stated that:

"The Project Proponent shall fully implement, all Project commitments and conditions, and is liable to ensure that all contractors and sub-contractors of the Project comply fully with all applicable Laws, the Rules, this procedure, Project commitments and conditions when providing services to the Project".

Environmental Conservation Department

ECD is responsible for the general supervision and coordination of all matters relating to the environment, and for providing guidance for existing regulatory frameworks.

ECD will do an inspection if

- ECD found out that EMP implementation is in compliance.
- ECD may find a third-party auditor or inspector to do environmental auditing or inspection on behalf of ECD.
- ECD may be fine according to the report of inspection by ECD staff or a third party.

Third-Party Consultant Firm

The Third-Party Consultant Firm is to ensure that the project developed is up-to-date and shall be performed in order to find out whether the expected outcomes are achieved as envisaged in the plan by comparing with the operating standards. If not, corrective actions have to be followed.

10.2 Environmental Management Plan

The Environmental Management Plan for Novotel Yangon Max Hotel Project proposes the institutional responsibilities for the implementation of the management actions, the implementation indicators, the timeframe for monitoring and follow-up, and also the estimated costs for effective implementation. The environmental management plan of Max (Myanmar) Hotel Company Limited is organized with the following sections:

1) Environmental Management Plan
2) Environmental Monitoring Plan
3) Waste Management Plan
4) Occupational Health and Safety Management Plan
5) Traffic Management Plan
6) Emergency Preparedness and Response Plan
7) Corporate Social Responsibility (CSR) Plan
8) Grievance Redress Mechanism (GRM)

Table 10-1 Environmental Management Plan during Operation Phase

Environmental Components	Project activities	Proposed Mitigation Measures	Estimated Costs (USD)	Residual Impacts	Responsibility Party
Physical Environment					
Air Quality	• Vehicular movement, generators, air-conditioning, kitchen, cleaning materials, storage of fuel and chemicals	• Implement traffic management practices to minimize congestion and emissions near the hotel entrance and out. • Install systems that use less energy and emit fewer pollutants. • Perform regular maintenance on generators, ventilation systems, air conditioning systems, and kitchen equipment to ensure efficient operation and minimal emissions. • Use non-toxic cleaning products, low-emission paints, and other sustainable materials to reduce harmful emissions.	500	Very Low	Max (Myanmar) Hotel Co., Ltd.
Noise and Vibration	• Vehicular movement from guests, generators and supply vehicles on the main road.	• Install sound barriers or plant trees along driveways and parking areas to help absorb and reduce noise dispersion. • Use modern systems designed to operate quietly, minimizing low-frequency noise. • Set noise level limits and restrict the duration of events, particularly in the evening and nighttime, to reduce disturbance. • Educate guests on noise reduction policies in common areas to help maintain a peaceful environment.	150	Very Low	Max (Myanmar) Hotel Co., Ltd.
Water Quality	• Cleaning activities in the kitchen and laundry operations • Improper solid waste disposal • Discharge from the usage of bathrooms and toilets in the guest rooms. • High-water consumption	• The hotel already uses environmentally friendly technologies for wastewater management, including raw water treatment and sewage treatment systems to ensure effluents are treated before being discharged into water bodies. • Install oil and grease traps to prevent kitchen effluents from polluting the drainage system. • Implement a waste management system that includes segregation, recycling, and proper disposal of all waste, with wet waste generated by the hotel being collected by YCDC for final disposal. • Vegetated buffer zones or rain gardens to minimize polluted runoff will be planted around the property to filter and slow down surface runoff.	500	Low	Max (Myanmar) Hotel Co., Ltd.

Environmental Components	Project activities	Proposed Mitigation Measures	Estimated Costs (USD)	Residual Impacts	Responsibility Party
		• Chemicals should be stored in a secure environment to prevent leaks or spills. • To reduce water consumption, install and maintain regularly low-flow taps, showerheads, and dual-flush toilets in guest rooms and public areas.			
Groundwater Consumption	• Water consumption in bathrooms and toilets of hotel rooms • Water usage for cleaning activities in hotel rooms and laundry operations. • Water consumption in the kitchen.	• Install water-efficient fixtures and fittings in bathrooms and toilets (e.g., dual-flush toilets, low-flow showerheads and faucets). • Implement a linen and towel reuse program to reduce the frequency of laundry operations. • Use high-efficiency washing machines and commercial dishwashers that minimize water consumption. • Train hotel staff on water conservation practices for cleaning and maintenance routines. • Monitor and record daily water usage to identify high-consumption areas and take corrective actions. • Recycle greywater (from showers and sinks) to use in toilet systems where regulations permit.	500	Low	Max (Myanmar) Hotel Co., Ltd.
Electricity Consumption	• Energy usage for air conditioning and refrigerators. • Electricity consumption for lighting and electrical gadgets. • Pumping water from the groundwater tank	• Install energy-efficient air conditioning units and refrigerators according to star ratings. • Use LED lighting and motion sensors to reduce energy consumption in low-occupancy areas. • Implement smart room controls that automatically adjust lighting and temperature based on occupancy. • Regularly maintain and service electrical appliances and HVAC systems to ensure optimal performance. • Install solar panels or other renewable energy sources to partially offset electricity demand. • Optimize the water pumping system with energy-efficient motors and control timers.	500	Low	Max (Myanmar) Hotel Co., Ltd.

Environmental Components	Project activities	Proposed Mitigation Measures	Estimated Costs (USD)	Residual Impacts	Responsibility Party
		• Educate staff and guests on energy-saving practices, including switching off appliances when not in use. • Monitor and analyse electricity usage patterns to identify inefficiencies and apply targeted improvements.			
Waste Generation					
Solid Waste	• Domestic waste from kitchens and dining areas • Daily routine cleaning of guest rooms, the restaurant, reception and public area • Hazardous waste such as fluorescent, bulbs, wiring, circuit boards, and cardboards from the repair and maintenance operations of hotel.	• Implement a waste segregation system to separate food waste, recyclables, hazardous and non-hazardous waste. • Designated, well-labelled bins should be placed in convenient locations. • Training staff to segregate waste correctly and disposed in designated areas. • Use covered and sealed bins to prevent unpleasant odors and pests. • Coordinate with YCDC for proper disposal of all solid waste. • Reduce waste generation by eco-friendly and reusable products in hotel operations. • Establish the recycling program for paper, plastics, and other recyclable materials. • Encourage guests to participate in waste reduction practices through awareness initiatives and signage. • Training staff to handle, and usage carefully and storage of cleaning agents and hazardous chemicals. • Batteries and other hazardous materials will be separated and stored in clearly marked containers and will be disposed of in compliance with relevant environmental guidelines.	250	Low	Max (Myanmar) Hotel Co., Ltd.
Liquid Waste	• The usage of bathrooms, toilets, dishwashing and food preparation in kitchen. • Cleaning activities	• Install and maintain a wastewater treatment system to ensure proper treatment before discharge into local drainage systems. • Conduct regular inspections and maintenance of plumbing and wastewater systems to avoid leaks or contamination. • Ensure compliance with local environmental regulations for wastewater discharge.	500		

Environmental Components	Project activities	Proposed Mitigation Measures	Estimated Costs (USD)	Residual Impacts	Responsibility Party
	• Leakage of sewage and sludge	• Regular check the septic tank to prevent leakage			
Social Environment					
Community Health and Safety	• Hygiene and sanitation water consumption • Electricity consumption • Traffic congestion	• Maintain high hygiene standards in all hotel operations, including proper sanitation measures in guest rooms, kitchens, and public facilities. • Implement regular health care for staff and provide training on hygiene and disease prevention. • Install water-saving technologies such as low-flow faucets, dual flush toilets, and water efficient laundry systems. • Regular inspect and monitor the water usage to ensure efficiency. • Use energy efficient appliances and systems to reduce the consumption of electricity. • Conduct regular maintenance of electrical systems to avoid energy wastage and reduce electrical shocks. • Implement a comprehensive emergency response plan. • Equip the hotel with adequate firefighting equipment, emergency alarms, and clearly marked emergency exit routes. • Conduct regular emergency drills for both staff and guests and coordinate with local authorities. • Design clear entrance and exit points for vehicles. • Schedule hotel supply deliveries and waste collection during non-peak hours to reduce road congestion. • Promote alternative transportation options for guests to minimize the impact of other vehicles and public transportation.	1000	Very Low	Max (Myanmar) Hotel Co., Ltd.
Occupational Health and Safety	• Accidental injuries to staffs, such as during cleaning activities, food preparation in the	• Establish emergency response plans for accidents, chemical exposure, and infectious disease outbreaks and train staff on how to manage equipment-related accidents. • Conduct regular checks of equipment, machinery and electrical systems to ensure properly and safely functions.	1000	Low	Max (Myanmar) Hotel Co., Ltd.

Environmental Components	Project activities	Proposed Mitigation Measures	Estimated Costs (USD)	Residual Impacts	Responsibility Party
	kitchen and the use of gas cylinders in cooking • Repair and maintenance of the hotel operation • Respiratory problems by breathing dust and gas emission from air-conditioning, generators and cleaning agents	• Ensure adequate ventilation in areas such as kitchen, laundry, and cleaning rooms to minimize respiratory risk. • Provide staff regular training on the safe handling, storage, and disposal of chemicals, as well as proper first aid procedures in case of exposure. • Provide clean and well-maintained hygiene facilities, including handwashing stations and sanitizers and Personal Protective Equipment (PPE), when handling the chemicals and maintenance machines. • Conduct regular health care for employees to detect and manage potential illnesses. • Ensure staff have access to medical services, including first aid and regular health checkups. • Conduct to employees in basic first aid training. • Implement a comprehensive occupational health and safety management plan to minimize and reduce the risks and health for employees and guests.			
Cultural Heritage	• Accidental fire outbreak in hotel premises, • Malfunctioning electrical systems or kitchen operations.	• Install advanced fire prevention systems throughout the hotel. • Conduct regular fire drills and maintenance checks on electrical systems to prevent malfunctions. • Provide fire safety training to staff, ensuring they are equipped to respond immediately to any fire-related emergencies.	300	Very Low	Max (Myanmar) Hotel Co., Ltd.
Fire Hazard	• Improper handling or maintenance of electrical supply system • Store flammable materials	• Conduct regular inspections and maintenance of all electrical systems, including wiring, lighting, and appliances to reduce the risk of shocks. • Ensure regular servicing and maintenance of heating, ventilation and air conditioning systems to prevent overheating and error in function. • Store flammable materials, including cleaning agents and fuel, in well-ventilated, and designated areas.	1500	Low	Max (Myanmar) Hotel Co., Ltd.

Environmental Components	Project activities	Proposed Mitigation Measures	Estimated Costs (USD)	Residual Impacts	Responsibility Party
	• Overloading the electricity system • Improper activities by guests and staffs in no smoking areas	• Provide employees with regular training on the proper handling, storage and disposal of hazardous chemicals to prevent accidental fires. • Clearly mark no smoking areas especially in guest rooms and public spaces. • Install and regularly fire systems, including sprinklers, fire extinguishers, and alarms, throughout the hotel to respond to potential fires. • Develop and regularly emergency preparedness such as drills to ensure response to emergencies occurs. • Train hotel staff in fire safety including how to use fire extinguishers, the proper response to fire alarms, and how to assist guests. • Display emergency contact numbers prominently throughout the site in case of fire or other emergencies. • Implement comprehensive emergency preparedness and response management plans to reduce risks and emergencies for employees and guests.			
			6,700		

**Cost estimation is calculated in 2025.*

Table 10-2 Environmental Management Plan during Decommissioning Phase

Environmental Components	Project activities	Proposed Mitigation Measures	Estimated Costs (USD)	Residual Impacts	Responsibility Party
Physical Environment					
Air Quality	• Dust particles and gaseous pollutants from various demolition activities • Removal of building materials and infrastructures	• Regularly water spraying demolition sites, roads and pathways to prevent the dust and fine particles. • Use dust barriers around demolition areas to prevent particles from drifting into nearby areas. • Regularly maintain construction equipment and vehicles to ensure and do not emit excess exhaust. • Use low-emission machinery and vehicles to reduce exhaust fumes and particulate matters released into the air. • Limit the vehicle movement to designated routes and areas. • Store hazardous materials in sealed containers to prevent accidental release of harmful pollutants. • Avoid open burning of demolition debris to prevent the release of toxic gases and pollutants. • Conduct regular air quality assessments to detect the levels of particulate matter, dust and harmful gases. • Conduct regular training for workers to raise awareness about the risks of pollutants and dust.	300	Low	Max (Myanmar) Hotel Co., Ltd.
Noise and Vibration	• Demolition machinery, such as excavators, heavy machineries and equipment	• Utilize modern machinery and vehicles thar are designed to minimize noise levels. • Regular maintenance of all machinery to ensure the operating efficiently and reduce noise emissions. • Install temporary noise barriers to reduce the transmission of noise into surrounding environments. • Use a combination of landscaping and soundproof fencing to buffer noise and reduce visual disturbance. • Provide prior notification to local residents about the schedule of noisy demolition activities.	300	Low	Max (Myanmar) Hotel Co., Ltd.

Environmental Components	Project activities	Proposed Mitigation Measures	Estimated Costs (USD)	Residual Impacts	Responsibility Party
Water Quality	• Dismantling activities and removal of building materials and infrastructures • Improper waste management	• Ensure all hazardous materials and cleaning agents should be stored in a designated and secure container to prevent leaks and spills. • Transport hazardous waste to certified disposal facilities that specialize in handling chemicals. • Install spill containment systems around storage areas for chemicals and fuel to prevent any accidental discharge into the surrounding environment. • Ensure drainage systems are properly maintained to prevent localized flooding. • Conduct regular water quality assessment at nearby water sources such as groundwater during demolition activities to ensure within the acceptable limits for water standards. • Use environmentally friendly, non-toxic alternatives to chemicals to reduce the potential water contamination. • Reduce the generation waste by promoting recycling and reusing materials from the demolition process.	1000	Low	Max (Myanmar) Hotel Co., Ltd.
Soil Contamination	• Disposal of debris and materials, such as asbestos and concrete • Demolition and material removal • Improper waste management	• Ensure the proper segregation of hazardous materials during demolition activities. • Implement erosion control techniques such as silt fences, or geotextile fabric around areas of exposed soil to prevent runoff and soil erosion. • Replanting the demolition site by native plants and grasses to stabilize and improve soil structure to enhance soil permeability. • Regularly inspected and maintained the heavy machinery to prevent leaks or spills of oils, fuels or other hazardous substances.	500	Very Low	Max (Myanmar) Hotel Co., Ltd.
Waste Generation					
Waste Generation	• Large amounts of demolition waste, including concrete,	• Identify all demolition waste in each category such as hazardous and non-hazardous materials that require specialized handling and disposal methods.	1000	Low	Max (Myanmar) Hotel Co., Ltd.

Environmental Components	Project activities	Proposed Mitigation Measures	Estimated Costs (USD)	Residual Impacts	Responsibility Party
	steel, and glass • improper waste management • Hazardous materials such as asbestos, lead, paint, or other chemicals	• Implement proper segregation practices on-site, with designated containers for different types of waste. • Establish recycling programs and appropriate recycling facilities to reduce waste generation. • Conduct regular inspections of waste generated to ensure compliance with waste management and to identify the reduced waste generation. • Provide training to workers for safe handling and disposal of materials to minimize exposure to them and the surrounding environment. • Engage certified hazardous waste disposal company for safe disposal of hazardous materials.			
Social Environment					
Community Health and Safety	• Demolition activities and flammable debris, inadequate disposal of leftover materials • Structural demolition • Dismantling activities • Improper waste management	• Implement noise reduction measures such as using soundproof machinery, equipment and install noise barriers to avoid noise to workers, community and surrounding areas. • Ensure the site cleaning to reduce the spread of dust and debris to surrounding areas. • Ensure wastes are segregated into recyclable and non-recyclable categories and disposed of responsibly. • Establish a grievance mechanism that allows residents and the local community to report any concerns related to the project. • Schedule the heavy traffic movement during non-peak hours to peak hours to minimize disruption to local roads and public transportation systems.	1000	Very Low	Max (Myanmar) Hotel Co., Ltd.
Occupational Health and Safety	• Direct exposure to dust and high noise levels from the demolition activities.	• Provide appropriate personal protective equipment (PPE) to the demolition workers. • Ensure that PPE is regularly inspected, well maintained, and properly used.	1000	Very Low	Max (Myanmar) Hotel Co., Ltd.

Environmental Components	Project activities	Proposed Mitigation Measures	Estimated Costs (USD)	Residual Impacts	Responsibility Party
	• Falling debris from the upper floors and improper handling hand tools such as cutters and grinders can cause accidental injuries. • Operation of heavy machinery can cause serious accidents from the equipment malfunctioning. • Slips, trips or falls due to uneven surfaces or the presence of scattered debris on the site.	• Rotate workers' shift to minimize their time in dusty areas and reduce overall exposure. • Ensure that all machinery and equipment used during decommissioning are regularly inspected. • Conduct regular health care for employees to detect and manage potential illnesses. • Ensure staff have access to medical services, including regular health checkups. • Ensure first aid kits are available in easily accessible areas within the demolition areas. • Ensure clear and effective safety and warning signs are displayed throughout the workplace, particularly those with dangerous conditions.			
Cultural Heritage	• Structural demolition • Debris from the demolition could be improperly handled, leading to accidental deposition on nearby historical sites. • Demolition activities can generate vibrations that may affect nearby historic structures, similar to	• Use controlled, low-impact demolition methods to prevent excessive vibration. • Install temporary barriers to reduce vibration travel to nearby areas. • Designate disposal routes far from historical buildings. • Ensure that staff are trained to follow protection protocols.	300	Very Low	Max (Myanmar) Hotel Co., Ltd.

Environmental Components	Project activities	Proposed Mitigation Measures	Estimated Costs (USD)	Residual Impacts	Responsibility Party
	construction- related vibrations.				
Fire Hazards	• Demolition activities and flammable debris, inadequate disposal of leftover materials • Structural demolition • Dismantling activities • Improper waste management	• Ensure all flammable debris, chemicals, and materials are segregated and stored safely in designated away from heat sources. • Implement waste management plan that includes safe handling and disposal of hazardous materials to reduce fire risks. • Conduct regular inspections of the decommissioning site to check and taken action to any identified risks. • Provide workers with regular training on the safe handling storage, and disposal of hazardous materials to prevent fire hazards. • Prohibit smoking areas around hazardous material and chemical storage areas. • Ensure fire extinguishers and portable fire suppression systems for emergency response. • Ensure access to fire hydrants and hose reels for quick response in case of a fire outbreak and maintain these systems to ensure they are operational at all times during decommissioning. • Establish clear emergency preparedness procedures and plan to prevent and reduce risks. • Conduct regular emergency drills to ensure response emergency occurs. • Display emergency contact numbers prominently throughout the site in case of fire or other emergencies.	500	Very Low	Max (Myanmar) Hotel Co., Ltd.
			5,900		

**Cost estimation is calculated in 2025.*

10.3 Environmental Monitoring Plan

Monitoring the environmental and social impacts in the receiving environment is important in evaluating the effectiveness of the Mitigation Plan so as to comply with the existing regulatory measures. During the operation and decommissioning phase monitoring will be undertaken to ensure the proposed mitigation measures for negative impacts as well as enhancement measures for positive impacts.

10.3.1 Environmental Monitoring Parameter

The monitoring parameters are selected based on impacts identified in the operation, and decommissioning phases of the Novotel Yangon Max Hotel Project. The parameters determined will reflect the effectiveness of the mitigation measures and the general environmental performance of the project. Monitoring of the parameters will be carried out at the various stages of the project as follows:

Operation Phase: To determine the impacts that might arise from the operation of hotel and operation complex activities.

Decommissioning Phase: To determine the impacts that might arise from the demolition activities of the hotel.

The following table presents the project monitoring plan. It includes (i) parameters to be monitored, (ii) location for monitoring, (iii) methodology, (iv) frequency, (v) responsibilities and (vi) relevance guidelines.

The project proponent performance will be monitored based on the mitigation measures. Once this IEE report approved, the monitoring report will be submitted once in every six months, as prescribed by the Ministry of Natural Resources and Environmental Conservation, in accordance with the Environmental Management Plan (EMP) and paragraph 108 of the Environmental Impact Assessment Procedure (2015). This ongoing assessment aims to ensure compliance with laws and regulations, mitigate risks, and manage potential impacts on the environment, stakeholders, and the community. The plan will be adjusted as needed based on significant seasonal changes to maintain its relevance and effectiveness. Data collection will focus on environmental conditions and relevant factors, with thorough analysis to identify trends and areas for improvement.

Table 10-3 Environmental Monitoring Plan in Operation Phase

Item	Impacts	Parameters	Method	Location	Frequency	Estimated Cost (USD) per Year	Responsible Party
The estimated budget may vary based on project conditions and currency fluctuations. Additional funds may be allocated if the projected costs increase due to specific circumstances. Estimated prices can also change depending on the implementation timeline and the selected service providers.							
Operation Phase							
1	Air Quality	NO_2, O_3, SO_2, CO, CO_2, PM_{10}, $PM_{2.5}$	Same method as baseline survey	Lat-16°49'11.49"N Long- 96° 7'51.46"E	Twice a year	1,300	Max (Myanmar) Hotel Co., Ltd.
2	Noise and Vibration	Ambient Noise (dB(A))	Same method as baseline survey	Lat-16°49'11.49"N Long-96° 7'51.46"E	Twice a year	300	Max (Myanmar) Hotel Co., Ltd.
3	Groundwater Quality	Carbonate, Bicarbonate, Sulphate, Chloride, Color, Total Alkalinity, Calcium Hardness, Iron, Magnesium Hardness, Phosphate, Sodium Chloride, Suspended Solids, Total Hardness, Total Solids	Same method as baseline survey	Lat-16°49'12.24"N Long-96° 7'52.79"E	Twice a year	1,300	Max (Myanmar) Hotel Co., Ltd.
4	Wastewater Quality	BOD, COD, pH, Total Nitrogen, Total Phosphorous, Total Suspended Solids, Oil and Grease, Total Coliform Bacteria	Same method as baseline survey	Treated water outlet from wastewater treatment plant	Twice a year	1,400	Max (Myanmar) Hotel Co., Ltd.
5	Odor	-	Same method as baseline survey	Lat-16°49'10.50"N Long-96° 7'53.78"E	Twice a year	200	Max (Myanmar) Hotel Co., Ltd.
6	Waste Generation	Solid and Liquid Waste	-Tracking of waste generation trends by type and	Proposed dump site, Kitchen, guest	Daily	800	Max (Myanmar) Hotel Co., Ltd.

Item	Impacts	Parameters	Method	Location	Frequency	Estimated Cost (USD) per Year	Responsible Party
			amount of waste generated, preferably by sources and collection practices	rooms and workplace area			
7	Energy Consumption	Water Consumption, Electricity and Fuel Consumption	-Check and compare records of electric meter bill -Regular check to ensure that energy efficiency -Management and control system is adopted and regularly maintained.	At workplace area	Monthly	1,000	Max (Myanmar) Hotel Co., Ltd.
8	Occupational Health and Safety	Training, and management plan	-Training and workshop for all staff, maintaining a record of occurrences and -assessment to reduce and prevent risk, conduct the OHS management plan	At workplace area	Monthly	1,000	Max (Myanmar) Hotel Co., Ltd.
9	Fire Hazard	Fire extinguisher, Combustible materials, and electrical system	-Regular inspection of fire extinguishers, electrical system and check and maintain the combustible materials	At workplace area	Monthly	1,000	Max (Myanmar) Hotel Co., Ltd.
						8,300	

Table 10-4 Environmental Monitoring Plan in Decommissioning Phase

Item	Impacts	Parameters	Method	Location	Frequency	Estimated Cost (USD) per Year	Responsible Party
The estimated budget may vary based on project conditions and currency fluctuations. Additional funds may be allocated if the projected costs increase due to specific circumstances. Estimated prices can also change depending on the implementation timeline and the selected service providers.							
1	Air Quality	NO_2, O_3, SO_2, CO, CO_2, PM_{10}, $PM_{2.5}$	24 consecutive hours per location (E PAS Has Scanner)	At the project site	Once	750	Max (Myanmar) Hotel Co., Ltd.
2	Noise and Vibration	Ambient Noise (dB(A))	24 consecutive hours per location (Digital Sound Level Meter for Noise and VM-55 Vibration meter for Vibration)	At the project site	Once	150	Max (Myanmar) Hotel Co., Ltd.
3	Effluent Water	BOD, COD, Oil and Grease, pH, Total Coliform Bacteria, Total Nitrogen, Total Phosphorous, Total Suspended Solids,	Sampling and measurement using field equipment and laboratory analyses	At the project site	Once	700	Max (Myanmar) Hotel Co., Ltd.
5	Waste Generation	Solid and Liquid Waste	Regular audits of waste segregation and collection practices	At the project site	Daily	400	Max (Myanmar) Hotel Co., Ltd.
6	Occupational Health and Safety	Occupational accidents, diseases, and dangerous occurrences and other accidents.	Training and workshop for all staff, maintaining a record of occurrences, and assessment to reduce and prevent risk, conduct the OHS management plan	Campsite, Workplace area	Weekly	500	Max (Myanmar) Hotel Co., Ltd.
7	Fire Hazard	Inspection and regular check of combustible materials	Regular inspection of fire extinguishers, electrical system and check of combustible materials	At the project site	Weekly	500	Max (Myanmar) Hotel Co., Ltd.
						3,000	

10.4 Waste Management Plan

The plan ensures compliance with environmental standards for waste disposal and wastewater treatment, while also addressing the safe handling of hazardous materials. By implementing regular monitoring, providing staff training, and reviewing waste generation data periodically, the hotel seeks continuous improvement in its waste management practices.

Objectives

The major objectives of the waste management plan are:

- To classify and manage waste effectively.
- To establish the systematic plan and handling procedures.
- To ensure compliance with national and international environmental standards.
- To provide and reduce waste pollution, recycling and disposal practices.
- To minimize environmental risks by waste pollutants.

Hazardous Materials

- Batteries and other hazardous materials will be stored in clearly marked containers.
- These materials will be disposed of in compliance with relevant environmental guidelines.
- Ensure disposal certificates are collected and documented for regulatory compliance.
- Conduct periodic reviews of hazardous waste handling processes to improve safety measures and reduce the usage of hazardous chemicals.

Solid and Liquid Waste

- Establish clear protocols for waste segregation across all hotel departments.
- Use grease traps in kitchen areas to capture oils and fats.
- Regularly maintain the wastewater treatment system to ensure its effectiveness.
- Track waste generation and disposal data to identify areas for improvement.
- Conduct monthly audits to verify that waste separation and treatment procedures are being followed.
- Regularly assess the efficiency of the wastewater treatment system and make improvements if necessary.

Waste Separation and Disposal

- Educate and train staff on proper waste segregation procedures.
- Introduce clear signage near waste bins for proper segregation.
- Regularly empty and clean waste bins to prevent contamination of materials.
- Monitor waste streams for contamination or mistakes in segregation.
- Regularly review the effectiveness of the waste separation process, adjusting processes as necessary.
- Track recycling rates and aim to continuously improve them

Plastic Waste

- Introduce refillable water stations and bottles for guests.
- Replace single-use plastic items with biodegradable or reusable alternatives in the hotel's operations.
- Regularly assess the success of plastic reduction programs and increase efforts to minimize plastic usage.
- Review waste audit data to identify further opportunities to reduce plastic waste.
- Continue to collaborate with recycling companies to ensure that plastic waste is being properly handled.

Regular Monitoring and training

- Conduct regular staff training on proper waste management, including waste segregation, chemical handling, and liquid waste management.
- Encourage staff to identify inefficiencies or issues in waste handling processes.
- Regular inspection will be conducted to ensure compliance with waste management practices.
- Use inspection reports to adjust procedures or provide further training if needed.
- Regularly review waste management performance and make necessary improvements.
- Monthly or quarterly reviews of the waste generation data will help identify opportunities to reduce waste or improve recycling rates.
- Provide training on proper waste segregation, handling chemicals or hazardous materials, and adhering to the waste management plan.
- Provide training for proper liquid waste handling and management practices, ensuring that all activities are conducted in accordance with the plan.

10.5 Occupational Health and Safety Management Plan

The Occupational Health and Safety (OHS) plan is designed to establish a framework for health, safety of all individuals involved in the hotel, including workers, employees and guests. The project should be implementing a comprehensive approach to minimize risks and ensure a safe working environment throughout the life cycle of the project.

Objectives

- To provide a safe and secure working environment for all workers, employees guests and visitors.
- To prevent accidents, injuries, and occupational illness.
- To promote safety awareness and ensure compliance with established safety protocols and regulations.
- To minimize risks associated with daily hotel operations and project-related activities, including transportation by utility services.

Risk Assessment and Hazard Identification

- Conduct regular risk assessments to identify potential hazards across work areas, receptions and high-risk operations.
- Maintain detailed regular assessments such as incident and accident reports for workplace injuries, guest safety incidents, and any environmental damages.
- Maintain a hazard log to record and track safety concerns, then provide well designed working environments and implement control measures.
- Ensure guest areas, such as pools, gyms, and stairways, are assessed for safety risks and equipped with appropriate signage and emergency equipment.

Safety Training Awareness

- Develop a formal Health and Safety policy;
- Provide regular training for workers and managers on safety procedures.

10.6 Traffic Management Plan

Traffic management plan focuses on controlling internal vehicle movement, aligning hotel operations with peak hours, and ensuring minimal impact on nearby communities and public transportation. The following measures are designed to enhance the safety, accessibility, and operational efficiency of the hotel, particularly during high-traffic events and daily peak hours. Furthermore, this plan is to ensure that hotel operations do not contribute to unnecessary delays or obstructions on the adjacent main road.

- Provide a coordinator for hotel's vehicle movement to organize check-in/check-out on peak hours.
- Inform event organizers to manage check-in/ check-out for guests during peak hours.
- Schedule loading/unloading of goods and service vehicles during before and after of peak hours.
- Develop a pre-event traffic plan for weddings, and conferences, to ensure adequate staff and signage are in place.
- Use noise-reducing practices such as limiting honking and engine idling near the entrance, especially at night.
- Clearly mark on-site parking areas and restrict roadside parking near the entrance of the hotel to avoid obstructing Pyay Road.
- Keep a log of vehicle flow and congestion incidents during major events to assess and improve traffic planning.
- Regular coordination meetings should be held with the security, event, and front office teams to align traffic procedures.

10.7 Emergency Preparedness and Response Plan

10.7.1 Fire Safety Plan

The fire safety plan should be planned at the project area in the operation, and decommissioning phases. The objectives of the firefighting plan are

- to inform all responsible personnel and understand their roles in the fire safety plan.
- to implement measures to mitigate fire risks effectively.
- to foster a safe environment for guests to relax and enjoy their stay.
- to maintain a commitment to continuous training and improvement in fire safety practices.

Within the hotel project area, although the risk of fire is low, there are concerns due to temporary electrical wiring, fire equipment, and other machinery.

The project proponent has developed the Emergency Response Plan to be implemented throughout the lifespan of project. This plan aims to ensure the safety of guests and staff before and during emergency case occurs, and implement for the post incident evaluation. The project proponent contributes to these concerns and will implement measures and emergency response procedures to ensure safety from fire hazards as outlined below.

a) Preventive Actions

- Regular inspections must be conducted to ensure that flammable waste materials within the hotel premises are kept clear and accessible.
- To establish the Emergency Response Team (ERT) to implement fire safety at the hotel, conduct monthly preparedness drills to ensure that all staff members are familiar with their roles during an emergency.
- Fire extinguishers and fire suppression equipment should be consistently checked and maintained to ensure they are in good working condition.
- All staff members will participate in fire drills conducted monthly to enhance preparedness.
- Fire warning signs must be properly installed and displayed throughout the facility.
- To prevent electrical fires, the Maintenance and Engineering (M&E) team will collaborate to conduct regular inspections of electrical systems.
- In the event of an emergency, all staff should be familiar with and have access to emergency telephone numbers, which should be posted in visible areas.
- Safety protocols must be strictly followed during the handling and storage of flammable substances to mitigate risks.
- Evaluate and improve the plan by continuous evaluation and feedback from these drills to refine the procedures and ensure a high level of preparedness.

b) Actions During an Incident

- Under the coordination of the management team, all designated personnel must carry out their assigned responsibilities promptly until relevant authorities arrive on the scene.

c) Post Incidents Evaluation

- All debris resulting from the incident must be cleared collectively by staff.
- Document the details of the fire incident, including the date, time, cause, response actions, and outcomes. Report the incident to relevant regulatory agencies as required.
- An inventory of damages should be compiled according to the relevant departments.

- Lessons learned from the incident must be documented, and collaborative efforts will be made with staff to prevent similar occurrences in the future.

Figure 10-1 Safe step Tips for Fire Hazards

Max (Myanmar) Company Limited has also established several committees, including Emergency Coordinator (Duty Manager), Shift Coordinator (Security Supervisor), Technical Coordinator (Engineering Supervisor), Emergency Response Team with First Aid qualified

staffs, dedicated to managing emergency events. This emergency plan will be used in case of fire. It outlines process for initial assessment of fire and, if deemed appropriate, procedures to use when evacuation is necessary. The fire procedure of Novotel Yangon Max Hotel is attached in the ***Appendix***.

10.7.2 Natural Disaster Management Plan

The Natural Disaster Response Plan is designed to ensure the safety of guests and staff and minimize the effects of an emergency that occurs at the hotel during natural disasters such as earthquake and floods while minimizing property damage. To prepare for these events, the responsible person will conduct thorough risk assessments to identify specific vulnerabilities.

Floods Management Plan

The management plan offers numerous benefits, including the reduction of displaced populations by minimizing flood-related disruptions. The plan also addresses environmental issues, contributing to a healthier ecosystem. By reducing flood risks, the plan lowers the incidence of waterborne diseases, thereby protecting public health. Additionally, the plan supports socio-economic growth by fostering a safer, more stable environment for communities to thrive.

The objective of the Flood Risk Sub-Management Plan is

- To minimize and prevent heavy rain and flooding at the project site and its surrounding areas while safeguarding lives through effective flood prevention and response strategies.
- To mitigate natural disasters and ensure the sustainable management of low-lying areas.
- To reduce overall flood risk, promote the maintenance and enhancement of ecosystems, and mitigate the risks and consequences associated with disasters.

The following measures are essential for effectively managing the identified risk:

a) Preventive Actions

This phase focuses on risk reduction, capacity building, and infrastructure resilience before a flood event occurs.

- Implement a comprehensive Emergency Response Plan, including flood-specific protocols and evacuation procedures.
- Conduct public awareness and training sessions for hotel staff and nearby community members on flood hazards, emergency procedures, and evacuation plans.
- Regularly maintain the drainage system especially in the rainy season to prevent blockages and ensure efficient water discharge.
- Implement eco-friendly stormwater practices, such as rain gardens, and permeable paving to reduce surface runoff and recharge groundwater.
- To enable real-time detection and awareness of earthquake events.

- To ensure effective communication and coordination with relevant authorities and response teams for timely action and safety measures.
- Emergency supplies including clean drinking water, dry food, medicine, first aid kits, lighting, and temporary shelter materials.
- Train emergency response personnel, ensuring Emergency Response Team has assigned roles and responsibilities with access to safety gear and communication tools.

b) Actions During an event

This phase ensures immediate and safe response during a flood event.

- Ensure issue alerts to the hotel's communication system.
- Follow evacuation procedures and guide guests and staff to elevated or pre-designated safe zones within the building or grounds.
- Shut down power supply in flooded areas to prevent electrical hazards by the responsible ERT member.
- Ensure continued access to clean water and food for all staffs and guests.
- Coordinate with local authorities and nearby facilities for emergency support if required.

c) Post Event Evaluation

This phase focuses on restoring normal operations, supporting affected individuals, and reducing the risk of future events.

- Conduct assessments of the building structure, utility systems, and drainage facilities.
- Sanitize affected areas to reduce the risk of waterborne diseases and contamination.
- Repair and rehabilitate drainage and flood barriers based on the assessment results.
- Provide mental health and medical support to affected guests and employees.
- Evaluate the effectiveness of the emergency response and update the disaster management plan accordingly.
- Document lessons learned and strengthen community engagement and preparedness efforts.

Earthquake Management Plan

The seismic activity poses a persistent threat to the safety of residents, infrastructure, and cultural sites, necessitating a comprehensive and proactive management approach.

The Earthquake Management Plan offers critical benefits, such as reducing the number of displaced people and casualties and protecting cultural and religious buildings that are vital to the heritage. This contributes to maintain a stable and safe environment. The plan promotes community involvement and education, fostering resilience and preparedness to mitigate seismic risks. It addresses environmental concerns by integrating sustainable practices and protective measures for the natural landscape, contributing to the environment.

The objectives of the plan are

- To provide a comprehensive approach to manage earthquake risks, with focus on preparedness, response, and mitigation to protect lives, infrastructure, and the environment and maintain prosperity by minimizing fatalities and the impact of extensive destruction.
- To reduce and mitigate the risks and consequences of disasters that could cause damage.
- To emphasize the importance of robust and well-managed emergency preparedness specifically for natural disasters, including earthquakes.

The following measures are essential for effectively managing the identified risk:

a) Preventive Actions

- Preventive actions focus on the building resilience, community capacity, and early warning before an earthquake occurs.
- Conduct structural safety audits and reinforce vulnerable areas, including non-structural components such as ceiling systems, glass panels, and fixtures.
- Provide earthquake preparedness training through simulations, drills, and public awareness campaigns. Focus on staff, guests, and high-risk groups (e.g., elderly or persons with disabilities).
- Establish and train an Emergency Response Team (ERT) to manage responsibilities before, during, and after a seismic event.
- To enable real-time detection and awareness of earthquake events.
- To ensure effective communication and coordination with relevant authorities and response teams for timely action and safety measures.
- Identify and mark safety zones, including open spaces around the hotel that are free of structural hazards (e.g., falling glass, electrical lines).
- Stockpile emergency provisions, including clean water, dry food, first aid kits, fire extinguishers, and personal protective equipment (PPE).
- Ensure availability of trained personnel, medical supplies, and communication tools in accessible and strategic locations.

b) Actions During an event

This action focus on life safety, rapid response, and minimizing injury or damage.

- Initiate "Drop, Cover, and Hold" protocol throughout the facility immediately upon earthquake onset.
- Activate the hotel's Emergency Response Plan and coordinate emergency teams via internal communication channels.
- Evacuate guests and staff calmly to designated open spaces.
- Cut off utilities if needed (gas, electricity, elevators) to prevent fire or further hazard.

- Deploy ERT members to assist injured persons, maintain order, and assess urgent damage or risks.
- Keep all guests informed using PA systems, multilingual signage, and direct coordination from floor captains.

c) Post Event Evaluation

This evaluation will conduct assessment, rehabilitation, and restoration of normal operations.

- Conduct structural safety inspections before reoccupying affected areas.
- Provide access to food, clean water, shelter, and psychological support for guests and staff.
- Offer first aid and emergency medical support using on-site supplies or coordinate with emergency medical services.
- Restore critical hotel operations in phases based on safety priorities (water, power, guest services).
- An accurate headcount of all guests and staff outside the building must be conducted to identify any individuals who may still be trapped inside.
- Full cooperation must be provided to rescue teams to enable timely and effective search and rescue operations.
- In the event of a major earthquake resulting in structural collapse, hotel management must immediately coordinate with search and rescue teams.
- If the building is deemed structurally unsafe and requires demolition, hotel representatives must also be prepared to give timely consent and cooperate with relevant authorities to ensure safety and minimize further risks.
- Document the incident and assess the effectiveness of the response procedures.
- Review and revise the Earthquake Management Plan as needed, incorporating lessons learned.
- Support community and government recovery programs where applicable, especially in shared infrastructure areas.

Figure 10-2 Safe step Tips for Earthquake

10.8 Corporate Social Responsibility (CSR) Plan

The project proponent has been established to implement the following CSR plan to support the development of local and regional communities as aiming for sustainable development. The project proponent is committed to fostering a positive relationship with the local community. Some of the recorded photos of the CSR by proponent are described in the Appendix. The CSR activities of the project proponent are the following -

Education Sector

- Providing and supporting educational stipends for employees' children, from kindergarten through university to master's degree level.

Health Sector

- Donating medical funds and supporting medical aids and assistance for social
- Building medical facilities and donating ambulances across the country

Community and environmental responsibilities and activities

- Offering social assistance to orphanages, old folks' homes, and areas affected by natural disasters, and environmental enhancement and protection.
- Preparing to respond and recover from emergency situations, helping communities 'build back better' with innovative tools and sustainable approaches.

10.9 Grievance Redress Mechanism (GRM)

The purpose of a GRM is to provide a structured process through which employees, and community can express concerns, report grievance of their concerns, queries and issues with the hotel. The main objectives of the GRM are as follows:

- To structure and manage the handling of comments, responses and grievances, and allow monitoring of the effectiveness of the mechanism and
- To ensure that comments, responses, and grievances are handled in a fair and transparent manner, in line with the applicable reference framework.

There are different options to raise grievance such as:

- ***Option 1:*** Filling the grievance form
- ***Option 2:*** Email to the provided address
- ***Option 3:*** Direct call to contact number

For Grievance Redness Mechanisms, following will be implemented. Grievance will able to seek proper legal remedies in accordance with the laws and regulations of Myanmar. The complaints will be further forwarded to the respective authorities such as GAD, ECD and representative of project proponent, to resolve as a part of grievance mechanism.

All grievances will be registered and responded with the preferred method of communication. The submitted comments or grievance has the right to keep as a confidential with special request. Grievances can also be submitted anonymously; however, this may limit the

possibilities for investigation of complaints and providing a response. The flowchart of the Grievance Redress Mechanism for the Novotel Yangon Max Hotel is described below:

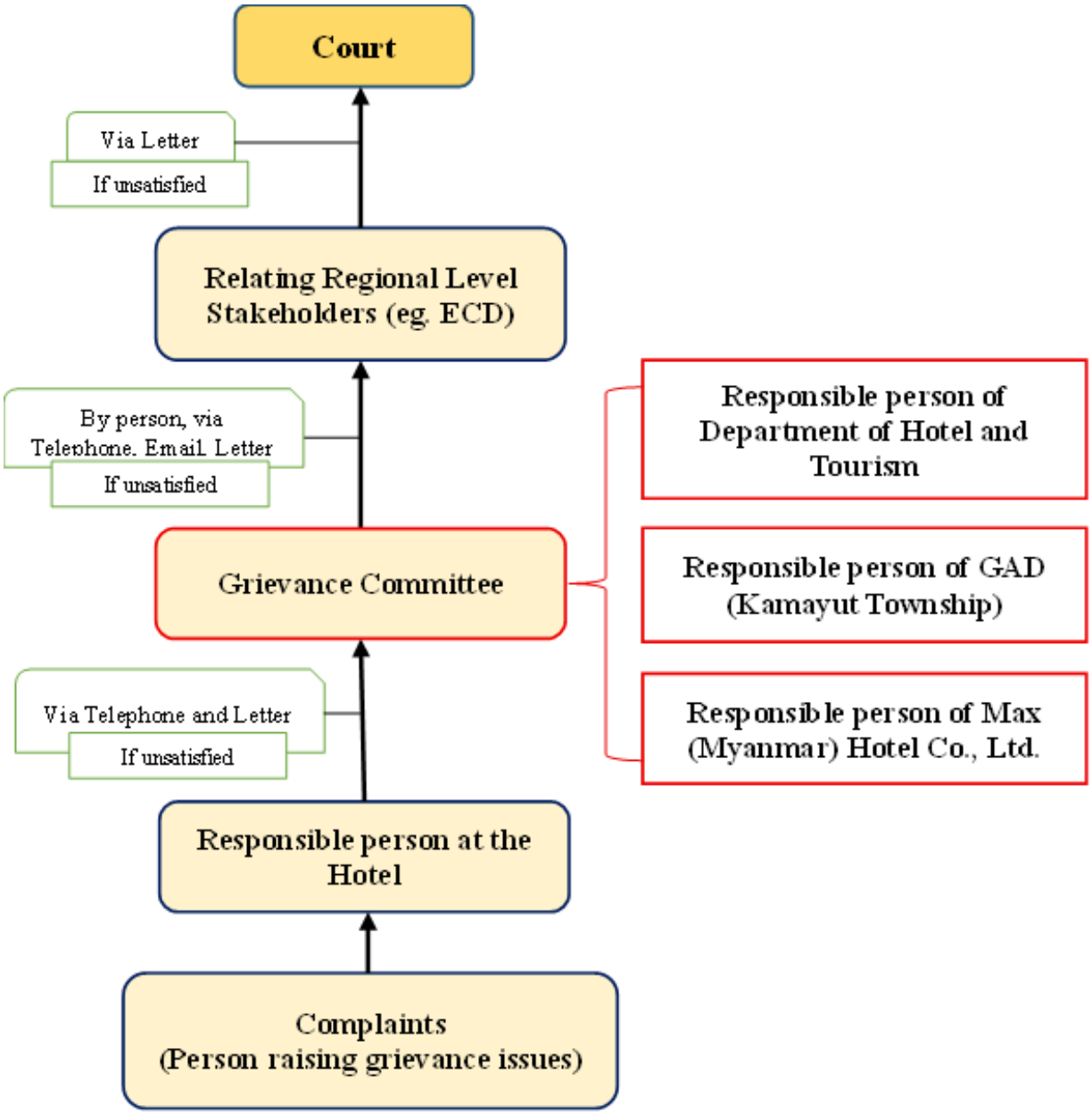


Figure 10-3 Grievance Redress Mechanism of the Novotel Yangon Max Hotel

CHAPTER 11 CONCULSION AND RECOMMENDATION

Assessment of potential environmental impacts and preparing of environmental management plan with recommended impact mitigation measures were prepared for operational phase and decommissioning phase according to the compliance with environmental impact assessment procedure (2015) and National Environmental (Emission) Guidelines. The main objectives of the Initial Environmental Examination (IEE) are;

a) To identify and assess potential impacts on the environment
b) To implement environmental management and mitigation measure plan
c) The environmental quality of the surrounding area will not be affected or decreased by the project activities.

In this IEE report study, baseline environmental data collection and site visit activities were conducted on October 2 and 3, 2024. According to the data interpretation for air monitoring results and other environmental baseline quality measurements were compared with National Environmental Quality (emission) guidelines, National Drinking Water Standards. The assessment of each impact is based on the operation, and decommissioning process of the project.

In the potential environmental impact assessment during the operation phase, there are no major impacts, the moderate levels are water, waste generation, occupational health and safety, cultural heritage and fire hazard. During the decommissioning phase, most of the activities are in low impacts and there are two moderate impacts which are the air and noise pollution.

11.1 Conclusion

The Initial Environmental Examination (IEE) for the Novotel Yangon Max Hotel has been conducted in accordance with the Myanmar Environmental Impact Assessment Procedure (2015), focusing on the project's operational and decommissioning phases. The project has already completed construction and is currently in full operation. Environmental assessments were conducted on physical, biological, and socio-economic aspects through direct observation and secondary data sources.

The environmental impact analysis, carried out using the Leopold Matrix methodology, identified moderate impacts during the operational phase, particularly concerning air and water quality, waste generation, and occupational health and safety. These impacts are manageable through the application of appropriate mitigation measures, including the adoption of wastewater treatment systems, soundproofing equipment, solid waste segregation and disposal procedures, and adherence to national environmental standards.

The biological environment does not face any significant threat; the hotel is located in a fully urbanized zone without proximity to protected areas or ecologically sensitive habitats. Socially, the project contributes positively by generating employment, promoting local business activity, and engaging in community support through CSR initiatives and sustainability programs.

The IEE also highlights the hotel’s implementation of an Environmental Management Plan (EMP), which includes comprehensive strategies for environmental monitoring, disaster

preparedness, waste management, occupational health and safety, and grievance redress mechanisms. The institutional framework supporting the EMP ensures compliance with relevant laws and regulations, with regular reviews and performance monitoring.

In conclusion, the environmental impacts associated with the Novotel Yangon Max Hotel project are within acceptable limits and can be effectively managed. The project demonstrates a commitment to sustainability and regulatory compliance. It is therefore recommended that the project be permitted to continue its operations, subject to the implementation of the proposed mitigation measures, monitoring plans, and continuous improvement in environmental performance.

11.2 Recommendation

The following recommendations have been made for efficient and effective implementation of environmental conservation, health and safety and social responsibilities through the lifespan of the proposed project.

1. Follow the comments and suggestions made by ECD after reviewing this IEE report.
2. Once IEE is approved by concerned authorities, strict implementation is essential.
3. For full and proper implementation of environmental management plan in this IEE report, well understanding and supports by proponent and authority is deem necessity.
4. Proposed emergency response plan should be implemented strictly both during operation and decommissioning phases of the project.
5. Daily, monthly and annual action plan shall be formulated based on environmental management plan in this IEE and practiced at operation level.
6. Necessary care and environmentally sound practices should be taken for activities out of project site particularly on goods and materials transportation.
7. Keep full records of environmental management activities and present to annual independent third-party environment audit.
8. Follow the audit report and comments.
9. Abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.
10. Clearly assign responsibilities for managing health and safety, ensuring that all relevant staff effectively carried out their duties.

Natural disasters are not expectable; therefore, the hotel should implement systematically preventive measures for proper and potential hazards of earthquake event. The hotel should use air conditioning systems that do not rely on ozone-depleting substances (ODS), such as CFCs or HCFCs. Preference should be given to equipment using eco-friendly refrigerants like R-32 or R-290 (propane) which are two low-global warming potential (GWP) that comply with international environmental standards. Finally, the proponent should follow the comments and suggestions made by ECD after reviewing this IEE report study. Once IEE is approved by concerned authorities, effective implementation of EMP by the project proponent is essential. The proponent should abide by environmental policy, laws, rules, and instructions of the Republic of the Union of Myanmar.

REFERENCES

(Ministry of Natural Resources and Environmental Conservation (MONREC), Environmental Impact Assessment Procedure, December 2015)

(Ministry of Natural Resources and Environmental Conservation (MONREC), National Environmental Quality (Emission) Guidelines, December 2015)

(IFC International Finance Corporation, Environment, Health and Safety Guidelines, Occupational Health and Safety, World Bank group, 2007)

(Myanmar National Drinking Water Quality Standards Myanmar, 2014)

(Guidelines for Drinking Water Quality, World Health Organization)

(General Administrative Department (Kamayut Township), Kamayut Township Data, 2023)

(Soil Types and Characteristics of Myanmar, Ministry of Agriculture and Irrigation, Land Use Division)

(The Project for the Improvement of Water Supply, Sewerage and Drainage System in Yangon City)

(Enhancing and Developing Seismic Risk Assessment for Bago City of Myanmar December 2015)

(https://earthquake.usgs.gov/earthquakes/eventpage/us7000pn9s/shakemap/intensity, n.d.)

(Two seismic gaps on the Sagaing Fault, Myanmar, derived from relocation of historical earthquakes since 1918)

APPENDIX

ကုမ္ပဏီမှတ်ပုံတင်လက်မှတ်

Certificate of Incorporation

မက်စ်(မြန်မာ)ဟိုတယ် ကုမ္ပဏီလီမိတက်

MAX (MYANMAR) HOTEL COMPANY LIMITED

Company Registration No. 141433423

မြန်မာနိုင်ငံကုမ္ပဏီများအက်ဥပဒေ ၁၉၁၄ ခုနှစ် အရ

မက်စ်(မြန်မာ)ဟိုတယ် ကုမ္ပဏီလီမိတက်

အား ၂၀၀၆ ခုနှစ် ဇန်နဝါရီလ ၅ ရက်နေ့တွင်

အစုရှယ်ယာအားဖြင့် တာဝန်ကန့်သတ်ထား သည့် အများနှင့်မသက်ဆိုင်သောကုမ္ပဏီ

အဖြစ် ဖွဲ့စည်းမှတ်ပုံတင်ခွင့် ပြုလိုက်သည်။

This is to certify that

MAX (MYANMAR) HOTEL COMPANY LIMITED

was incorporated under the Myanmar Companies Act 1914 on 5 January 2006 as a Private Company Limited by Shares.

ကုမ္ပဏီမှတ်ပုံတင်အရာရှိ

Registrar of Companies

ရင်းနှီးမြှုပ်နှံမှုနှင့်ကုမ္ပဏီများညွှန်ကြားမှုဦးစီးဌာန

Directorate of Investment and Company Administration

Former Registration No. 1833/2005-2006

ပုံစံ (မနသ-၂)

မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ကော်မရှင်

ခွင့်ပြုမိန့်

ခွင့်ပြုမိန့် အမှတ်၊ မနသ- ၉၃၉ / ၂၀၁၃ ။ ၂၀၁၃ ခုနှစ်၊ အောက်တိုဘာ လ ၄ ရက်

မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ကော်မရှင်သည် မြန်မာနိုင်ငံသားများ ရင်းနှီးမြှုပ်နှံမှု ဥပဒေပုဒ်မ ၁၂(ခ) အရ ဤခွင့်ပြုမိန့်ကို ထုတ်ပေးလိုက်သည်။

(က) ရင်းနှီးမြှုပ်နှံသူ၏အမည် ဦးဇော်ဇော်

(ခ) အဘ အမည် ဦးယူစိန်

(ဂ) နိုင်ငံသား/ အမျိုးသားမှတ်ပုံတင်အမှတ် ၁၂/ဗဟန(နိုင်) ၀၈၄၅၅၄

(ဃ) နေရပ်လိပ်စာ အမှတ်(၁၉)၊ ကုက္ကိုင်းရိပ်သာလမ်း၊ ရွှေတောင်ကြား၊ (၂)ရပ်ကွက်၊ ဗဟန်းမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။

(င) ဖွဲ့စည်းထားသည့် သို့မဟုတ် ဖွဲ့စည်းမည့်အဖွဲ့အစည်း Max (Myanmar) Hotel Co., Ltd.

(စ) ရင်းနှီးမြှုပ်နှံမှုပြုလုပ်မည့် လုပ်ငန်းအမျိုးအစား Novotel Hotel (Yangon) အမည်ဖြင့် နိုင်ငံတကာ အဆင့်မီ ဟိုတယ် ဝန်ဆောင်မှုလုပ်ငန်း

(ဆ) ရင်းနှီးမြှုပ်နှံမှုပြုလုပ်သည့်အရပ်ဒေသ(များ) ရန်ကုန်တိုင်းဒေသကြီး၊ ကမာရွတ်မြို့နယ်၊ မြေတိုင်းရပ်ကွက်အမှတ် (၃၇-F)၊ မြေကွက်အမှတ် (၆၅၊ ၆၆- ဘီ) ရှိမြေ ဧရိယာ (၃.၂၉၅) ဧက

(ဇ) မတည်ငွေရင်းပမာဏ(ကျပ်) ၅၆၉၉၀၀၀.၀၀(သန်း) (အမေရိကန်ဒေါ်လာ (၅၃.၀၀)သန်း အပါအဝင် စုစုပေါင်းကျပ် ငါးသောင်း ခြောက်ထောင် ကိုးရာ သန်း တိတိ)

ဥက္ကဋ္ဌ

မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ကော်မရှင်

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်
မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်
အမှတ်(၁)၊ သစ္စာလမ်း၊ ရန်ကင်းမြို့နယ်၊ ရန်ကုန်မြို့

တယ်လီဖုန်း- ၀၁-၆၅၈၁၃၃
ဖက်(စ်)-၀၁-၆၅၇၈၂၄

စာအမှတ် ၊ ရက- ၉ / ၁ / ၂၀၁၅ (၀၁၃၉၈)
ရက်စွဲ ၊ ၂၀၁၅ ခုနှစ်၊ ဇူလိုင်လ ၁၆ ရက်

အကြောင်းအရာ။ **စီးပွားဖြစ်စတင်ဆောင်ရွက်သည့်နေ့အား အတည်ပြုသတ်မှတ်ကြောင်း အကြောင်းကြားခြင်း**

ရည်ညွှန်းချက် ။ Max (Myanmar) Hotel Co., Ltd.၏ ၂၀၁၅ ခုနှစ်၊ ဇွန်လ ၂၅ရက်နေ့ ရက်စွဲပါ စာအမှတ်၊ မမမ/ဟိုတယ်ထွေ(၀၉၈)

၁။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှု ကော်မရှင်၏ ခွင့်ပြုမိန့် အမှတ်၊ မနသ - ၉၃၉ /၂၀၁၃ ဖြင့် ရန်ကုန်တိုင်းဒေသကြီး၊ ကမာရွတ်မြို့နယ်၊ မြေတိုင်းရပ်ကွက် အမှတ် (၃၇-F)၊ မြေကွက် အမှတ် (၆၅၊၆၆-ဘီ)ရှိ မြေ ဧရိယာ(၃.၂၉၅)ဧက ပေါ်တွင် Novotel Hotel (Yangon) အမည်ဖြင့် နိုင်ငံတကာအဆင့်မီ ဟိုတယ်ဝန်ဆောင်မှုလုပ်ငန်း ဆောင်ရွက်နေသော Max (Myanmar) Hotel Co., Ltd.၏ ဟိုတယ်စတင်ဖွင့်လှစ်သည့် ၂၀၁၅ ခုနှစ်၊ ဧပြီလ ၃ ရက်နေ့ကိုစီးပွားဖြစ်စတင်သည့်နေ့အဖြစ်အတည်ပြုသတ်မှတ်ပါသည်။

၂။ သို့ဖြစ်ပါ၍ မြန်မာနိုင်ငံသားများရင်းနှီးမြှုပ်နှံမှု ဥပဒေ ပုဒ်မ ၂၀ (က) အရ စီးပွားဖြစ်လုပ်ငန်းစတင်သည့် နေ့မှစ၍ ဝင်ငွေခွန်ကင်းလွတ်ခွင့် ကာလ ၅ နှစ် ခံစားခွင့်ပြုသဖြင့် သက်ဆိုင်ရာဌာနများနှင့် ဆက်သွယ်ဆောင်ရွက်နိုင်ရန် အကြောင်းကြားပါသည်။

ဥက္ကဋ္ဌ(ကိုယ်စား)
(အောင်နိုင်ဦး၊ အတွင်းရေးမှူး)

မန်နေဂျင်းဒါရိုက်တာ
Max (Myanmar) Hotel Co., Ltd.

မိတ္တူကို
ပြည်ထောင်စုဝန်ကြီးရုံး၊ ဘဏ္ဍာရေးဝန်ကြီးဌာန
ညွှန်ကြားရေးမှူးချုပ် ၊ ပြည်တွင်းအခွန်များဦးစီးဌာန
ရုံးလက်ခံ / မျှောစာတွဲ

တိုင်းဒေသကြီး ညွှန်ကြားရေးမှူးရုံး
ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန
ရန်ကုန်တိုင်းဒေသကြီး၊ ရန်ကုန်မြို့

အမှတ် ၁၀ (ကျ) ၊ ၅၅ လမ်း (ကုန်သည်လမ်းနှင့် ကမ်းနားလမ်းကြား) ၊ ဗိုလ်တထောင်မြို့နယ်၊ Postal Code-11161
ဖုန်း - ၀၁ ၈၂၀၃၈၃၈၊ ဖက်စ် - ၀၁ ၈၂၀၃၈၃၉၊ အီးမေးလ် - ygnecd@gmail.com

စာအမှတ်၊ ရက/EIA/၅(၄)(၁၄၆၈ /၂၀၂၄)
ရက်စွဲ၊ ၂၀၂၄ ခုနှစ် ၊ ဧပြီလ ၂၄ ရက်

သို့

အုပ်ချုပ်မှုဒါရိုက်တာ

Max Myanmar Hotel Co., Ltd.

အကြောင်းအရာ။ **Max Myanmar Hotel Co., Ltd. မှ ဆောင်ရွက်မည့် Novotel Yangon Max ဟိုတယ် ဝန်ဆောင်မှုလုပ်ငန်း၏ ကနဦး ပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း(Initial Environmental Examination - IEE) အစီရင်ခံစာနှင့် စပ်လျဉ်း၍ သဘောထားမှတ်ချက် ပြန်ကြားစာ အား ထပ်ဆင့် အသိပေး အကြောင်းကြားခြင်း**

ရည်ညွှန်းချက်။ (၁) ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ ညွှန်ကြားရေးမှူးချုပ်ရုံး၊ နေပြည်တော်၏ ၁၁-၁၁-၂၀၁၃ ရက်စွဲပါ စာအမှတ်၊ အီးအိုင်အေ-၁/၁၃/ ၂၀၁၃(၇၀၇/၂၀၁၃)

(၂) ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ ညွှန်ကြားရေးမှူးချုပ်ရုံး၊ နေပြည်တော်၏ ၁၁-၄-၂၀၂၄ ရက်စွဲပါ စာအမှတ်၊ EIA-၁/၃/ သဘောထား(၁၆၁၉/၂၀၂၄)

၁။ ရန်ကုန်တိုင်းဒေသကြီး၊ ကမာရွတ်မြို့နယ်၊ ပြည်လမ်း၊ မြေတိုင်းရပ်ကွက်အမှတ် (၃၇-F)၊ မြေကွက်အမှတ်(၆၅၊၆၆-ဘီ)၊ မြေရီယာ (၃.၂၉၅)ကေတွင် Max Myanmar Hotel Co., Ltd. မှ ဆောင်ရွက်လျက်ရှိသည့် Novotel Yangon Max ဟိုတယ်ဟိုတယ်ဝန်ဆောင်မှုလုပ်ငန်း နှင့် စပ်လျဉ်း၍ တင်ပြလာသော ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း(Initial Environmental Examination – IEE) အစီရင်ခံစာအား စိစစ်သုံးသပ်၍ ရည်ညွှန်း(၁)ပါစာဖြင့် ဦးစီးရုံးချုပ် မှ စီမံကိန်းအဆိုပြုသူထံ သဘောထားမှတ်ချက်ပြန်ကြားခဲ့သော်လည်း IEE အစီရင်ခံစာအား ပြန်လည်ပြင်ဆင် တင်ပြလာခြင်းမရှိသဖြင့် ကနဦးနှိုးဆော်စာများအား ဦးစီးရုံးချုပ်မှ ထုတ်ပြန်ပြီး အကြောင်းကြားထားခဲ့ပြီး ဖြစ်ပါသည်။

၂။ Max Myanmar Hotel Co., Ltd. ၏ အဆိုပြုစီမံကိန်းအတွက် IEE အစီရင်ခံစာ ပြုစုရေးသားသည့် တတိယအဖွဲ့အစည်းနှင့်ပတ်သက်၍ ကြားကာလအကြံပေးလုပ်ကိုင်သူ မှတ်ပုံတင်ခြင်း အထောက်အထားလက်မှတ် ကိုင်ဆောင်ထားသော တတိယပုဂ္ဂိုလ်အဖွဲ့အစည်းများမှ ပြင်ဆင်ရေးသားဆဲ အစီရင်ခံစာ အဟောင်းများတွက် ဆက်လက်ရေးသားခွင့်မှာ ၂၉-၂-၂၀၂၄ တွင်ကုန်ဆုံးပြီဖြစ်ပါသောကြောင့် ကုမ္ပဏီ

အနေဖြင့် အောက်ပါအတိုင်း ဆောင်ရွက်တင်ပြသွားရန် ရည်ညွှန်း(၂)ပါစာဖြင့် အကြောင်းကြားချက်အရ သိရှိဆောင်ရွက်နိုင်ရေးအတွက် ထပ်ဆင့်အသိပေးအကြောင်းကြားအပ်ပါသည်-

(က) ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း (IEE) အစီရင်ခံစာ ဆောင်ရွက်ပြုစုခြင်းကို စီမံကိန်းအဆိုပြုသူ ကိုယ်တိုင်သော်လည်းကောင်း၊ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း အပိုဒ် ၁၈ နှင့်အညီ လုပ်ငန်း လိုင်စင်ရယူထားသော ပုဂ္ဂိုလ် သို့မဟုတ် အဖွဲ့အစည်းကို ခန့်အပ်၍သော်လည်းကောင်း ဆောင်ရွက်နိုင်ပြီး ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း အပိုဒ် ၃၂ နှင့်အညီ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနသို့ တင်ပြအတည်ပြုချက်ရယူရန်နှင့် ဦးစီးဌာနမှ တတိယအဖွဲ့အစည်းအား အတည်ပြုပြန်ကြားပြီးမှသာ အဆိုပါအဖွဲ့အစည်းဖြင့် လုပ်ငန်းအပ်နှံခြင်းနှင့် ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းကို စတင်ဆောင်ရွက်ရန်၊

(ခ) ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း အပိုဒ် ၃၄၊ ၃၅၊ ၃၆၊ ၃၇၊ ၃၈ တို့နှင့်အညီ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း အစီရင်ခံစာကို အတည်ပြုထားသည့် တတိယပုဂ္ဂိုလ် သို့မဟုတ် အဖွဲ့အစည်းဖြင့် ရေးဆွဲပြုစု၍ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဝန်ကြီးဌာနသို့ တင်ပြ အတည်ပြုချက်ရယူရန်၊

(ကျော်ဆန်းနိုင်)
ညွှန်ကြားရေးမှူး

မိတ္တူကို

ညွှန်ကြားရေးမှူး၊ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ရေးဌာနခွဲ၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ နေပြည်တော်။

ရုံးလက်ခံ၊ မျှောစာတွဲ၊ အမှုတွဲချုပ်

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ

သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန

ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန

ညွှန်ကြားရေးမှူးချုပ်ရုံး

စာအမှတ်၊ EIA - ၁/၃/ TP(အတည်ပြု)(၄၅၂ /၂၀၂၄)

ရက်စွဲ ၊ ၂၀၂၄ ခုနှစ်၊ အောက်တိုဘာလ ၂၃ ရက်

သို့

ညွှန်ကြားရေးမှူး

ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ ရန်ကုန်တိုင်းဒေသကြီး

အကြောင်းအရာ။ **Max Myanmar Hotel Co.,Ltd. မှ အကောင်အထည်ဖော်ဆောင်ရွက်မည့် Novotel Yangon Max ဟိုတယ်ဝန်ဆောင်မှုလုပ်ငန်းအတွက် ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း (IEE) အစီရင်ခံစာအား ဆောင်ရွက်မည့် တတိယအဖွဲ့အစည်းတင်ပြလာခြင်းနှင့်ပတ်သက်၍ သဘောထားပြန်ကြားခြင်း**

ရည် ညွှန်း ချက် ။ ရန်ကုန်တိုင်းဒေသကြီး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ ညွှန်ကြားရေးမှူးရုံး၏ ၁၃-၉-၂၀၂၄ ရက်စွဲပါ စာအမှတ်၊ ရက/ EIA/ ၆ (၃၀၃၈ (က)/ ၂၀၂၄)

၁။ အကြောင်းအရာပါကိစ္စနှင့်ပတ်သက်၍ Max Myanmar Hotel Co.,Ltd. မှ ရန်ကုန်တိုင်းဒေသကြီး၊ ကမာရွတ်မြို့နယ်၊ ပြည်လမ်း၊ မြေတိုင်းရပ်ကွက်အမှတ် (၃၇-F)၊ မြေကွက်အမှတ် (၆၅၊ ၆၆ - ဘီ)၊ မြေဧရိယာ (၃.၂၉၅) ကေပေါ်တွင် အကောင်အထည်ဖော်ဆောင်ရွက်မည့် Novotel Yangon Max ဟိုတယ်ဝန်ဆောင်မှုလုပ်ငန်းအတွက် ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းအစီရင်ခံစာအား လုပ်ငန်းလိုင်စင်ရရှိထားသည့် E-Guard Environmental Services Co.,Ltd. ဖြင့် ရေးဆွဲဆောင်ရွက်ခွင့်ပြုနိုင်ပါရန် ရည်ညွှန်းချက်ပါစာဖြင့် တင်ပြလာပါသည်။

၂။ ဟိုတယ်နှင့်ခရီးသွားဖွံ့ဖြိုးရေးလုပ်ငန်းအတွက် (၁) ရေထုညစ်ညမ်းမှုကြိုတင်ကာကွယ်ခြင်း၊ ထိန်းချုပ်ခြင်း၊ စောင့်ကြပ်ကြည့်ရှုခြင်းနှင့် ထိခိုက်မှုကြိုတင်ခန့်မှန်းခြင်း၊ (၂) လေထုညစ်ညမ်းမှုကြိုတင်ကာကွယ်ခြင်းနှင့်ထိန်းချုပ်ခြင်း၊ (၃) ဂေဟစနစ်နှင့်ဇီဝမျိုးစုံမျိုးကွဲ၊ (၄) ဇလဗေဒ၊ မြေပေါ်ရေနှင့် မြေအောက်ရေထိန်းသိမ်းခြင်း၊ (၅) မြေအသုံးချမှု၊ (၆) လူမှုရေးဆိုင်ရာလေ့လာခြင်းနှင့် သရုပ်ခွဲဆန်းစစ်ခြင်း၊ (၇) ဆူညံသံနှင့် တုန်ခါမှု၊ (၈) စွန့်ပစ်အစိုင်အခဲနှင့်ဘေးအန္တရာယ်ရှိ စွန့်ပစ်ပစ္စည်းစီမံခန့်ခွဲခြင်း စသည့်ကျွမ်းကျင်မှုနယ်ပယ် (၈) ခုလိုအပ်ကြောင်းနှင့် အဆိုပါလိုအပ်နယ်ပယ် (၈) ခု အတွက် တတိယပုဂ္ဂိုလ်များသည် အဖွဲ့၏ အဓိကပုဂ္ဂိုလ်များ (Key Person) ဖြစ်ရန် လိုအပ်မည်ဖြစ်ပါသည်။

၃။ E-Guard Environmental Services Co.,Ltd သည် ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းနှင့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းပြုလုပ်သည့် အဖွဲ့အစည်းများ လုပ်ငန်းလိုင်စင်ဆိုင်ရာ လုပ်ထုံးလုပ်နည်းအရ အကြံပေးအဖွဲ့အမျိုးအစား (က) ရရှိထားသည့် အဖွဲ့အစည်း (လိုင်စင်အမှတ် EIA CO (A)-001/2023) ဖြစ်ကြောင်း၊ ဟိုတယ်နှင့်ခရီးသွားဖွံ့ဖြိုးရေးလုပ်ငန်းအတွက် လေ့လာဆောင်ရွက်ခွင့်ရှိသည့် အဖွဲ့အစည်းဖြစ်ကြောင်း၊ အထက်အပိုဒ် (၂) ပါ သတ်မှတ်ချက်များနှင့်ကိုက်ညီပြီး လူမှုရေးဆိုင်ရာလေ့လာခြင်းနှင့် သရုပ်ခွဲဆန်းစစ်ခြင်း၊ ရှေးဟောင်းသုတေသနနှင့် ယဉ်ကျေးမှုအမွေအနှစ်နယ်ပယ်များအတွက် Supporting Staff (၂) ဦးတို့ပါရှိကြောင်း စိစစ်တွေ့ရှိရပါသည်။

၄။ သို့ဖြစ်ပါ၍ Max Myanmar Hotel Co.,Ltd. မှ အကောင်အထည်ဖော်ဆောင်ရွက်မည့် Novotel Yangon Max ဟိုတယ်ဝန်ဆောင်မှုလုပ်ငန်းနှင့်စပ်လျဉ်း၍ အောက်ပါတို့ကို ဆောင်ရွက်ရန် လိုအပ်ကြောင်း လုပ်ငန်းရှင်ထံသို့ ဆက်လက်ပြန်ကြားပေးရန် အကြောင်းကြားပါသည်-

(က) Max Myanmar Hotel Co.,Ltd. မှ ရန်ကုန်တိုင်းဒေသကြီး၊ ကမာရွတ်မြို့နယ်၊ ပြည်လမ်း၊ မြေတိုင်းရပ်ကွက်အမှတ် (၃၇-F)၊ မြေကွက်အမှတ် (၆၅၊ ၆၆ - ဘီ)၊ မြေဧရိယာ (၃.၂၉၅) ကေပေါ်တွင် အကောင်အထည်ဖော်ဆောင်ရွက်မည့် Novotel Yangon Max ဟိုတယ်ဝန်ဆောင်မှုလုပ်ငန်းအတွက် ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း အစီရင်ခံစာကို ပူးတွဲပါ လေ့လာဆန်းစစ်ရေးအဖွဲ့ဝင်များဖြင့် ဆောင်ရွက်မည့်အပေါ် အတည်ပြုကြောင်း၊

(ခ) အတည်ပြုထားသည့် တတိယအဖွဲ့အစည်းဖြင့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း အပိုဒ် ၃၄၊ ၃၅၊ ၃၆၊ ၃၇၊ ၃၈ တို့နှင့်အညီ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း (Initial Environmental Examination – IEE) အစီရင်ခံစာအား ၃၀-၄-၂၀၂၅ ရက်နေ့ နောက်ဆုံးထား၍ သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနသို့ တင်ပြအတည်ပြုချက်ရယူရန်။

၂၃/၁၀/၂၀၂၄

ညွှန်ကြားရေးမှူးချုပ်(ကိုယ်စား)

(ဒေါက်တာဆန်းဦး၊ ဒုတိယညွှန်ကြားရေးမှူးချုပ်)

မိတ္တူကို

ညွှန်ကြားရေးမှူးချုပ်ရုံး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန

E-Guard Environmental Services Co.,Ltd (သတ်မှတ်ကာလအတွင်း ပြန်လည်တင်ပြ နိုင်ရေး လုပ်ငန်းရှင်နှင့် ချိတ်ဆက်ဆောင်ရွက်သွားရန်)

Max Myanmar Hotel Co.,Ltd.

ရုံးလက်ခံ၊ မျှောစာတွဲ၊ အမှုတွဲချုပ်

Max Myanmar Hotel Co.,Ltd. မှ အကောင်အထည်ဖော်ဆောင်ရွက်မည့် Novotel Yangon Max ဟိုတယ်ဝန်ဆောင်မှုလုပ်ငန်းအတွက် ကနဦးဝိစ်ဝန်းကျင်ဆန်းစစ်ခြင်း (IEE) အစီရင်ခံစာ ဆောင်ရွက်မည့် E-Guard Environmental Services Co.,Ltd. မှ လေ့လာဆန်းစစ်ရေးအဖွဲ့ဝင်များ

စဉ်	ပညာရှင်အမည်	လုပ်ငန်းလိုင်စင်အမှတ်	အဆိုပြုအစီရင်ခံစာအတွက် တာဝန်ယူဆောင်ရွက်ခွင့်ပြုသည့် နယ်ပယ်များ
၁	Daw Thein Mwe Khin	EIA-C 006/2023	1. Social Study and Analysis
၂	U Soe Min	EIA-C 031/2023	1. Water Pollution Prevention, Control, Monitoring and Prediction of Impacts
၃	U Tin Aung Moe	EIA-C 055/2024	1. Ecology and Biodiversity
၄	U Aung Myint Myat	EIA-C 008/2023	1. Noise and Vibration
၅	U Si Thu Aung	EIA-AC 094/2024	1. Hydrology, Surface Water and Ground Water Conservation
၆	Daw Thet Mhue Khin	EIA-C 054/2024	1. Solid Waste and Hazardous Waste Management
၇	U Thaw Tar Htun	EIA-C 007/2023	1. Air Pollution Prevention and Control
၈	Daw May Thu Win	EIA-AC 003/2023	1. Legal Study and Analysis
၉	U Aung Si Thu Thein	EIA-AC 006/2023	1. Land Use
၁၀	Daw Moe Sat Wathan	EIA-AC 098/2024	2. Archeology and cultural heritage
၁၁	Daw Jaint Yandanar	Supporting Staff	3. Social Study and Analysis
၁၂	U Htoo Myat Noe Oo	Supporting Staff	4. Archeology and cultural heritage

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ

The Government of the Republic of the Union of Myanmar

သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန

Ministry of Natural Resources and Environmental Conservation

ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန

Environmental Conservation Department

ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ငန်းလိုင်စင် (အဖွဲ့အစည်း)

Environmental Impact Assessment License (Organization)

E Guard Environmental Services Co,.Ltd ၊ **ကုမ္ပဏီမှတ်ပုံတင်အမှတ်-၁၁၀၄၈၇၂၂၃** အား **အကြံပေးအဖွဲ့ အမျိုးအစား(က)** အဖြစ် လုပ်ကိုင်ဆောင်ရွက်ရန် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ငန်းလိုင်စင်ကို ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းနှင့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းပြုလုပ်သည့် တတိယပုဂ္ဂိုလ် သို့မဟုတ် အဖွဲ့အစည်းလုပ်ငန်းလိုင်စင်ဆိုင်ရာ လုပ်ထုံးလုပ်နည်းနှင့်အညီ ဤဝန်ကြီးဌာန၏ အတည်ပြုချက်ဖြင့် ထုတ်ပေးလိုက်သည်။

It is hereby issued that E Guard Environmental Services Co,.Ltd ၊ Registration No.110487223 has fulfilled the requirements for obtaining an Environmental Impact Assessment License to conduct as an **Consulting Organization Type (A)** under the Licensing Procedure for the Third Persons or Organizations Undertaking Initial Environmental Examination and Environmental Impact Assessment, approved by the Ministry of Natural Resources and Environmental Conservation.

လေ့လာဆန်းစစ်ခွင့်ရှိသည့် စီမံကိန်းလုပ်ငန်းအုပ်စုများမှာ ပူးတွဲပါအတိုင်း ဖြစ်သည်။

The categories of projects, eligible to be conducted, are as attached.

လိုင်စင်နံပါတ် License Number	: EIA-CO(A)001/2023 (ထပ်တိုး)
ထုတ်ပေးသည့် ရက်စွဲ Date of Issue	: 1-1-2024
ကုန်ဆုံးသည့် ရက်စွဲ Date of Expiry	: 31-12-2026

(သိန်းတိုး)

ညွှန်ကြားရေးမှူးချုပ်

အဖွဲ့အစည်းက လေ့လာဆန်းစစ်ခွင့်ရှိသော စီမံကိန်းလုပ်ငန်းအုပ်စုများ

စဉ်	လုပ်ငန်းလိုင်စင်ဆိုင်ရာလုပ်ထုံးလုပ်နည်း ပုံစံ (ခ) ပါ စီမံကိန်းလုပ်ငန်းအုပ်စုများ	ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း နောက်ဆက်တွဲ (က) ပါ စီမံကိန်းနံပါတ်များ
၁။	ကုန်းတွင်းရေနံနှင့် သဘာဝဓာတ်ငွေ့စီမံကိန်းလုပ်ငန်း	(၁၂) မှ (၁၄)
၂။	ကမ်းလွန်ရေနံနှင့် သဘာဝဓာတ်ငွေ့စီမံကိန်းလုပ်ငန်း	(၁၅) မှ (၁၇)
၃။	ရေနံနှင့် သဘာဝဓာတ်ငွေ့ ပြုပြင်သန့်စင်ထုတ်လုပ်ခြင်းစီမံကိန်းလုပ်ငန်း	(၁၈) မှ (၂၀) နှင့် (၂၅)
၄။	ရေနံနှင့် သဘာဝဓာတ်ငွေ့ သယ်ယူပို့ဆောင်ခြင်း၊ သိုလှောင်ခြင်းနှင့် ဖြန့်ဖြူးခြင်းလုပ်ငန်း	(၂၁) မှ (၂၃)
၅။	ဓာတ်ငွေ့ရည် (LPG)၊ သဘာဝဓာတ်ငွေ့ (CNG) နှင့် စက်သုံးဆီအရောင်းဆိုင်လုပ်ငန်း	(၂၄)
၆။	ကျောက်မီးသွေးသုံးလျှပ်စစ်ဓာတ်အား ထုတ်လုပ်ခြင်းလုပ်ငန်း	(၅)
၇။	ရေအားလျှပ်စစ်စီမံကိန်းလုပ်ငန်း	(၂)
၈။	အခြားပြန်ပြည့်မြဲစွမ်းအင် စီမံကိန်းလုပ်ငန်း	(၇)၊ (၁၀) နှင့် (၁၁)
၉။	သဘာဝဓာတ်ငွေ့သုံး သို့မဟုတ် ဇီဝဓာတ်ငွေ့သုံး လျှပ်စစ်ဓာတ်အား ထုတ်လုပ်ခြင်း လုပ်ငန်း	(၄)
၁၀။	ဓာတ်ငွေ့၊ အပူစွမ်းအင်နှင့် အပူငွေ့သုံး လျှပ်စစ်ဓာတ်အား ထုတ်လုပ်ခြင်းလုပ်ငန်း	(၈) နှင့် (၉)
၁၁။	စွန့်ပစ်ပစ္စည်းမှ လျှပ်စစ်ဓာတ်အား ထုတ်လုပ်ခြင်းလုပ်ငန်း	(၆)
၁၂။	လျှပ်စစ်ဓာတ်အား ဖြန့်ဖြူးခြင်းလုပ်ငန်း	(၂၆) မှ (၂၈)
၁၃။	စိုက်ပျိုးရေးထုတ်ကုန်များ ထုတ်လုပ်ခြင်းလုပ်ငန်း	(၂၉)နှင့် (၃၀)
၁၄။	မွေးမြူရေးဆိုင်ရာလုပ်ငန်း	(၃၁) မှ (၃၃)၊ (၃၇)နှင့် (၃၈)
၁၅။	ရေလုပ်ငန်းဆိုင်ရာလုပ်ငန်း	(၃၄) မှ (၃၆)
၁၆။	သစ်တောထိန်းသိမ်းအုပ်ချုပ်ခုတ်လှဲထုတ်လုပ်ခြင်းဆိုင်ရာ ဖွံ့ဖြိုးရေးလုပ်ငန်း	(၃၉) နှင့် (၄၀)
၁၇။	အစားအစာ ပြုပြင်မွမ်းမံထုတ်လုပ်ခြင်းလုပ်ငန်း	(၄၂) မှ(၅၂) နှင့် (၅၇)
၁၈။	အဖျော်ယမကာ ပြုပြင်မွမ်းမံထုတ်လုပ်ခြင်းလုပ်ငန်း	(၅၃) မှ (၅၆)
၁၉။	အဝတ်အထည်၊ ချည်ထည် ထုတ်လုပ်ခြင်းနှင့် ဆေးဆိုးခြင်းလုပ်ငန်း	(၅၈) နှင့် (၅၉)
၂၀။	သားရေထည်ပစ္စည်း ထုတ်လုပ်ခြင်းလုပ်ငန်း	(၆၀) နှင့် (၆၁)
၂၁။	သစ်စက်၊ သစ်အချောထည်ပစ္စည်း၊ သစ်သားပြားနှင့် သစ်အဝိုင်းအစ ထုတ်လုပ်ခြင်းလုပ်ငန်း	(၆၂) နှင့် (၆၃)
၂၂။	ပျော့ဖတ်နှင့် စက္ကူထုတ်လုပ်ခြင်းလုပ်ငန်း	(၆၄)
၂၃။	ပုံနှိပ်လုပ်ငန်းနှင့်အခြားအလှဆင်လုပ်ငန်း	(၆၅)

အဖွဲ့အစည်းက လေ့လာဆန်းစစ်ခွင့်ရှိသော စီမံကိန်းလုပ်ငန်းအုပ်စုများ

စဉ်	လုပ်ငန်းလိုင်စင်ဆိုင်ရာလုပ်ထုံးလုပ်နည်း ပုံစံ (ခ) ပါ စီမံကိန်းလုပ်ငန်းအုပ်စုများ	ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း နောက်ဆက်တွဲ (က) ပါ စီမံကိန်းနံပါတ်များ
၂၄။	ဓာတုပစ္စည်းထုတ်လုပ်ခြင်းလုပ်ငန်း	(၆၆) မှ (၇၅)
၂၅။	ပေါက်ကွဲစေတတ်သော ပစ္စည်းများထုတ်လုပ်ခြင်းလုပ်ငန်း	(၇၆) မှ (၇၈)
၂၆။	ဖန်ထည်/မှန်ထည်နှင့် ကြွေထည်ပစ္စည်းထုတ်လုပ်ခြင်းလုပ်ငန်း	(၇၉) နှင့် (၈၀)
၂၇။	ဘိလပ်မြေ၊ အခြားဆောက်လုပ်ရေးကုန်ကြမ်းပစ္စည်းများနှင့် နိုင်လွန်ကတ္တရာ ထုတ်လုပ်ခြင်းလုပ်ငန်း	(၈၁) မှ (၈၄)
၂၈။	သတ္တုပစ္စည်းထုတ်လုပ်သန့်စင်ခြင်းလုပ်ငန်း	(၈၅) မှ (၈၈)
၂၉။	သဘော်ကျင်း၊ သဘော်နှင့် ရထားတည်ဆောက်ပြုပြင်တပ်ဆင်ခြင်းလုပ်ငန်း	(၈၉) နှင့် (၉၀)
၃၀။	ရာဘာ နှင့် စက်မှုလုပ်ငန်းသုံးကုန်ကြမ်းပစ္စည်းများ ထုတ်လုပ်ခြင်းလုပ်ငန်း	(၉၁) မှ (၉၃)
၃၁။	လျှပ်စစ်ပစ္စည်းနှင့် အီလက်ထရောနစ်ပစ္စည်းများ ထုတ်လုပ်ခြင်းလုပ်ငန်း	(၉၄) မှ (၉၆)
၃၂။	စက်ပစ္စည်း၊ ယာဉ်နှင့် စက်ကိရိယာပစ္စည်းများ ထုတ်လုပ်ပြုပြင်တပ်ဆင်ခြင်း လုပ်ငန်း	(၉၇) မှ (၁၀၁)
၃၃။	ဘေးအန္တရာယ်မရှိသော စွန့်ပစ်ပစ္စည်း ပြန်လည် အသုံးပြုခြင်း၊ စွန့်ပစ်ခြင်းနှင့် မီးရှို့ခြင်းလုပ်ငန်း	(၁၀၃) မှ (၁၀၅)
၃၄။	ဘေးအန္တရာယ်ရှိသော စွန့်ပစ်ပစ္စည်း ပြန်လည်အသုံးပြုခြင်းနှင့် စွန့်ပစ်ခြင်း လုပ်ငန်း	(၁၀၆) နှင့် (၁၀၇)
၃၅။	စွန့်ပစ်ရေနှင့် ရေဆိုးများ ပြုပြင်သန့်စင်တည်ဆောက်ခြင်းလုပ်ငန်း	(၁၀၈) နှင့် (၁၀၉)
၃၆။	စက်မှုလုပ်ငန်း၊ စိုက်ပျိုးရေးလုပ်ငန်း သို့မဟုတ် မြို့ပြရေပေးဝေရေးအတွက် မြေအောက်ရေဖွံ့ဖြိုးရေးလုပ်ငန်း	(၁၁၀)
၃၇။	ဆည်၊ ရေလှောင်တမံနှင့် ဆည်မြောင်း စနစ် တည်ဆောက်ခြင်းလုပ်ငန်း	(၄၁) နှင့် (၁၁၁)
၃၈။	အများပြည်သူကို ထိခိုက်စေနိုင်သော ရေကန်၊ မြစ်၊ ချောင်း၊ တူးမြောင်းများ မြေဖို့ခြင်းလုပ်ငန်း	(၁၁၂)
၃၉။	မြို့ပြတည်ဆောင်ရေးအတွက် မြစ်ရေ၊ ပင်လယ်ရေထိန်း နံရံတည်ဆောက်ခြင်း၊ ကမ်းလွန်ပင်လယ်ရေ တားဆီးခြင်း လုပ်ငန်း	(၁၁၃)
၄၀။	သောင်တူးခြင်းနှင့်မြစ်ကြောင်းထိန်းသိမ်းခြင်းလုပ်ငန်း	(၁၁၄)နှင့်(၁၁၅)
၄၁။	စက်မှုဇုန်တည်ဆောက်ရေးနှင့် ဖွံ့ဖြိုးရေးလုပ်ငန်း	(၁၁၈)
၄၂။	ဆေးရုံတည်ဆောက်ခြင်းလုပ်ငန်း	(၁၁၉)
၄၃။	သုသာန်၊ သင်္ချိုင်း တည်ဆောက်ခြင်းလုပ်ငန်း	(၁၂၀)
၄၄။	ဟိုတယ်နှင့် ခရီးသွားဖွံ့ဖြိုးရေးလုပ်ငန်း	(၁၂၁)
၄၅။	ဂေါက်ကွင်းတည်ဆောက်ခြင်းလုပ်ငန်း	(၁၂၂)
၄၆။	လူနေအိမ်ရာဖွံ့ဖြိုးရေး၊ ပြန်လည်နေရာချထားရေးဆိုင်ရာ မြို့ပြဖွံ့ဖြိုးရေးနှင့် မြို့သစ်တည်ဆောက်ရေး စီမံကိန်း လုပ်ငန်း	(၁၄၂)
၄၇။	မြစ်ချောင်း၊ အင်းအိုင်၊ ကမ်းရိုးတန်း၊ သဘာဝအရင်းအမြစ်များ၊ ယဉ်ကျေးမှုအမွေအနှစ်များနှင့် ဆက်စပ်သောလုပ်ငန်း	(၁၅၁)မှ (၁၅၅)

အဖွဲ့အစည်းက လေ့လာဆန်းစစ်ခွင့်ရှိသော စီမံကိန်းလုပ်ငန်းအုပ်စုများ

စဉ်	လုပ်ငန်းလိုင်စင်ဆိုင်ရာလုပ်ထုံးလုပ်နည်း ပုံစံ (ခ) ပါ စီမံကိန်းလုပ်ငန်းအုပ်စုများ	ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်းနောက်ဆက်တွဲ (က) ပါ စီမံကိန်းနံပါတ်များ
၄၈။	အိပ်ဆောင်များ၊ ကွန်ဒိုမီနီယံအဆောက်အဦ တည်ဆောက်ခြင်းလုပ်ငန်း	(၁၄၃)
၄၉။	ဘက်စုံအားကစားကွင်း တည်ဆောက်ခြင်းလုပ်ငန်း	(၁၄၄)
၅၀။	အထူးစီးပွားရေးဇုန်တည်ဆောက်ရေးနှင့် ဖွံ့ဖြိုးရေးစီမံကိန်းလုပ်ငန်း	(၁၄၅)
၅၁။	ကုန်တိုက်ကြီးများ၊ ကုန်သွယ်ရေးဌာန၊ အဆင့်မြင့်စျေးများ တည်ဆောက်ခြင်းလုပ်ငန်း	(၁၄၆)
၅၂။	မြေအောက်ထပ် တည်ဆောက်ခြင်းလုပ်ငန်း	(၁၄၇)
၅၃။	အခြေခံအဆောက်အအုံလုပ်ငန်း	(၁၄၈)
၅၄။	စားသောက်ဆိုင်လုပ်ငန်း	(၁၅၀)
၅၅။	မီးရထားနှင့် လျှပ်စစ်ရထား ပို့ဆောင်ရေးလုပ်ငန်း	(၁၂၃)
၅၆။	ကြိုးတပ်ကား တပ်ဆင်ပြေးဆွဲခြင်းလုပ်ငန်း	(၁၂၄)
၅၇။	လေဆိပ်နှင့် လေယာဉ်ပြေးလမ်း တည်ဆောက်ခြင်းလုပ်ငန်း	(၁၂၅)
၅၈။	တံတား၊ မြစ်ကူးတံတား၊ ဂုံးကျော်တံတား တည်ဆောက်ခြင်းနှင့် အဆင့်မြှင့်တင်ခြင်းလုပ်ငန်း	(၁၂၆) နှင့် (၁၂၇)
၅၉။	ဥမင်လိုဏ်ခေါင်းဖောက်လုပ်ခြင်းလုပ်ငန်း	(၁၂၈)
၆၀။	အဝေးပြေးလမ်းမအသစ် ဖောက်လုပ်ခြင်းလုပ်ငန်း	(၁၂၉)
၆၁။	လမ်းတည်ဆောက်ခြင်းနှင့် အဆင့်မြှင့်တင်ခြင်းလုပ်ငန်း	(၁၃၀) နှင့် (၁၃၁)
၆၂။	သဘော်သွားလာရေးလုပ်ငန်း	(၁၁၆)
၆၃။	ဆိပ်ကမ်းတည်ဆောက်ခြင်းလုပ်ငန်း	(၁၁၇)
၆၄။	အဝေးပြေးကားဂိတ်ကြီးများ တည်ဆောက်ခြင်းလုပ်ငန်း	(၁၄၉)
၆၅။	ကျောက်၊သဲထုတ်လုပ်ခြင်း၊ ဆောက်လုပ်ရေးလုပ်ငန်းသုံးနှင့် ကြွေထည် မြေထည်လုပ်ငန်းသုံး ကုန်ကြမ်းပစ္စည်းများ ထုတ်လုပ်ခြင်းလုပ်ငန်း	(၁၃၂) နှင့် (၁၃၃)
၆၆။	စက်မှုတွင်းထွက်ကုန်ကြမ်း တူးဖော်ထုတ်လုပ်ခြင်းနှင့် သန့်စင်ခြင်းလုပ်ငန်း	(၁၃၄)
၆၇။	မြေပေါ်နှင့် မြေအောက် သတ္တုတူးဖော်ထုတ်လုပ် ပြုပြင်သန့်စင်ခြင်းလုပ်ငန်း	(၁၃၅) မှ (၁၄၁)
၆၈။	ဆက်သွယ်ရေးကွန်ရက်ဖွံ့ဖြိုးရေးလုပ်ငန်း	(၁၅၆) နှင့် (၁၅၇)

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန
ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန
ညွှန်ကြားရေးမှူးချုပ်ရုံး

စာအမှတ်၊EIA-၁/LP(ဖြန့်၀ေ)(၂၉၁ /၂၀၂၄)
ရက်စွဲ ၊၂၀၂၄ ခုနှစ်၊ ဇူလိုင်လ ၁၂ ရက်

သို့

ဦးအေးသီဟ
Managing Director
E Guard Environmental Services

အကြောင်းအရာ။ **အကြံပေးအဖွဲ့အစည်းလုပ်ငန်းလိုင်စင်ရရှိထားသည့် အဖွဲ့အစည်းများ ထပ်တိုးစီမံကိန်းလုပ်ငန်းအုပ်စု ရရှိခြင်းနှင့်စပ်လျဉ်း၍ သိရှိနိုင်ပါရန် အကြောင်းကြားခြင်း**

၁။ အကြောင်းအရာပါကိစ္စနှင့်ပတ်သက်၍ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနအနေဖြင့် ဖွံ့ဖြိုးရေးစီမံကိန်းလုပ်ငန်းများကို ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း (EIA) ၊ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း (IEE) နှင့် ပတ်ဝန်းကျင်စီမခန့်ခွဲမှုအစီအစဉ် (EMP) အစီရင်ခံစာများ ရေးသားပြုစုဆောင်ရွက်နိုင်ရေးအတွက် ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းနှင့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းပြုလုပ်သည့် တတိယပုဂ္ဂိုလ် သို့မဟုတ် အဖွဲ့အစည်းများ လုပ်ငန်းလိုင်စင်ဆိုင်ရာ လုပ်ထုံးလုပ်နည်းနှင့်အညီ လုပ်ငန်းလိုင်စင်များ ထုတ်ပေးလျက်ရှိပါသည်။

၂။ လုပ်ငန်းလိုင်စင်ရရှိထားသော အကြံပေးအဖွဲ့အစည်းများအနေဖြင့် လိုင်စင်ရတတိယပုဂ္ဂိုလ်များ ဖြည့်သွင်း၍ လျှောက်ထားရာတွင် ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းနှင့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းပြုလုပ်သည့် တတိယပုဂ္ဂိုလ် သို့မဟုတ် အဖွဲ့အစည်းများ လုပ်ငန်းလိုင်စင်ဆိုင်ရာ လုပ်ထုံးလုပ်နည်းပါ စည်းကမ်းချက်များနှင့်ကိုက်ညီပါကြောင်း စိစစ်တွေ့ရှိရပါသဖြင့် လုပ်ငန်းလိုင်စင်ဆိုင်ရာစိစစ်သုံးသပ်ရေးဘုတ်အဖွဲ့၏ (၁၁-၇-၂၀၂၄) နေ့အစည်းအဝေးဆုံးဖြတ်ချက်အရ ထပ်တိုးစီမံကိန်းလုပ်ငန်းအုပ်စု (က) မျိုး ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်းနောက်ဆက်တွဲ (က) ဇယားအမှတ်စဉ် (၁၅၁ မှ ၁၅၅ ထိ) ထပ်တိုးရရှိပါသည်။

၃။ သို့ဖြစ်ပါ၍ E-Guard Environmental Services အနေဖြင့် (၁၂-၇-၂၀၂၄) နေ့အထိ လုပ်ငန်းရရှိမှုမှာ အမှတ်စဉ် (၃) နျူကလီးယားစွမ်းအင်သုံး လျှပ်စစ်ဓာတ်အား ထုတ်လုပ်ခြင်းလုပ်ငန်းနှင့် အမှတ်စဉ် (၁၀၂) လက်နက်ခဲယမ်းများ ထုတ်လုပ်ခြင်းလုပ်ငန်းမှအပ ကျန်လုပ်ငန်း (၁၅၅) မျိုးကို ဆောင်ရွက်ခွင့်ရှိပါကြောင်း အကြောင်းကြားပါသည်။

3/12/2024
(သိန်းတိုး)
ညွှန်ကြားရေးမှူးချုပ်

NOVOTEL
HOTELS & RESORTS

YANGON MAX

Emergency Plan

Fire Procedure
Yangon Novotel Max

Creation Date:	1 September 2017
Updated:	20 October 2017

Developed By: Adrienne Grove
GM Risk Services, Exera Ltd

EXERA
Securing Myanmar

Releasing Authority: General Manager

Purpose

This emergency plan will be used in case of fire. It outlines process for initial assessment of fire and, if deemed appropriate, procedures to use when evacuation is necessary.

Table of Contents

Key Personnel

The following key personnel are required for execution of this plan:

- Emergency Coordinator (Duty Manager)
- Shift Coordinator (Security Supervisor)
- Technical Coordinator (Engineering Supervisor)
- Emergency Response Team, including:
    - Crisis Manager (Duty Resident/GM)
    - Meeting Point Coordinator (Senior Reception)
    - Guest Checker (FO)
    - Communications Coordinator (Intel Center)
    - Shift Helper (Security)
    - Evacuators (16)

The following department supervisors also have roles, when their department is open:

- Kitchen/FB
- HR/Training
- Health Club/Pool
- Banquets

Tenants of shops and office spaces also have responsibilities within this plan, when their respective spaces are open.

Fire Procedure

Start of shift

The Emergency Coordinator / Duty Manager (DM) will complete the Emergency Response Team (ERT) Assignments sheet at the start of each shift and pass it to the Communication Coordinator /Intel Center to alert relevant staff. The Communications Coordinator will inform the DM if any do not acknowledge the message.

Initial Alarm

When an alarm is triggered, there is a three-minute window to reset it before the entire building's alarm system is triggered.

The DM and Shift Coordinator (Security Supervisor) will proceed to the scene with a junior engineer and identify if it is a false alarm. The Technical Coordinator (Senior Engineer) will proceed to the Fire Control Center (FCC) to await information and raise the general alarm if necessary. The emergency response team will proceed to the Intel Center to put on vests, get clipboards and walkie talkies and prepare to conduct an evacuation.

False Alarm

The DM will inform the Technical Coordinator (Eng) immediately if it is a false alarm. The Shift Coordinator will inform the Communications Coordinator. The Engineering Supervisor will carry out the necessary functions in the FCC to reset all alarm systems and the Communications Coordinator will carry out any applicable guest notifications. DM will coordinate any follow on actions or investigations.

Fire / Evacuation Order

In the case of an actual fire, the jr engineer will begin clearing the immediate area of the fire.

The DM will go to the FCC to get clipboard, walkie talkie and Emergency Coordinator vest, then will proceed to the Meeting Point. The Senior Engineer will get the Technical Coordinator clipboard and vest and remain in the FCC to coordinate necessary response, maintaining a log of actions taken.

The MP Coordinator will go to the MP to maintain a log of missing or injured guests and assist with first aid if possible. The Guest Checker will also go the MP and begin to check off guests as they check in. The Crisis Manager will also proceed to the MP to carry out actions outlined on the crisis card.

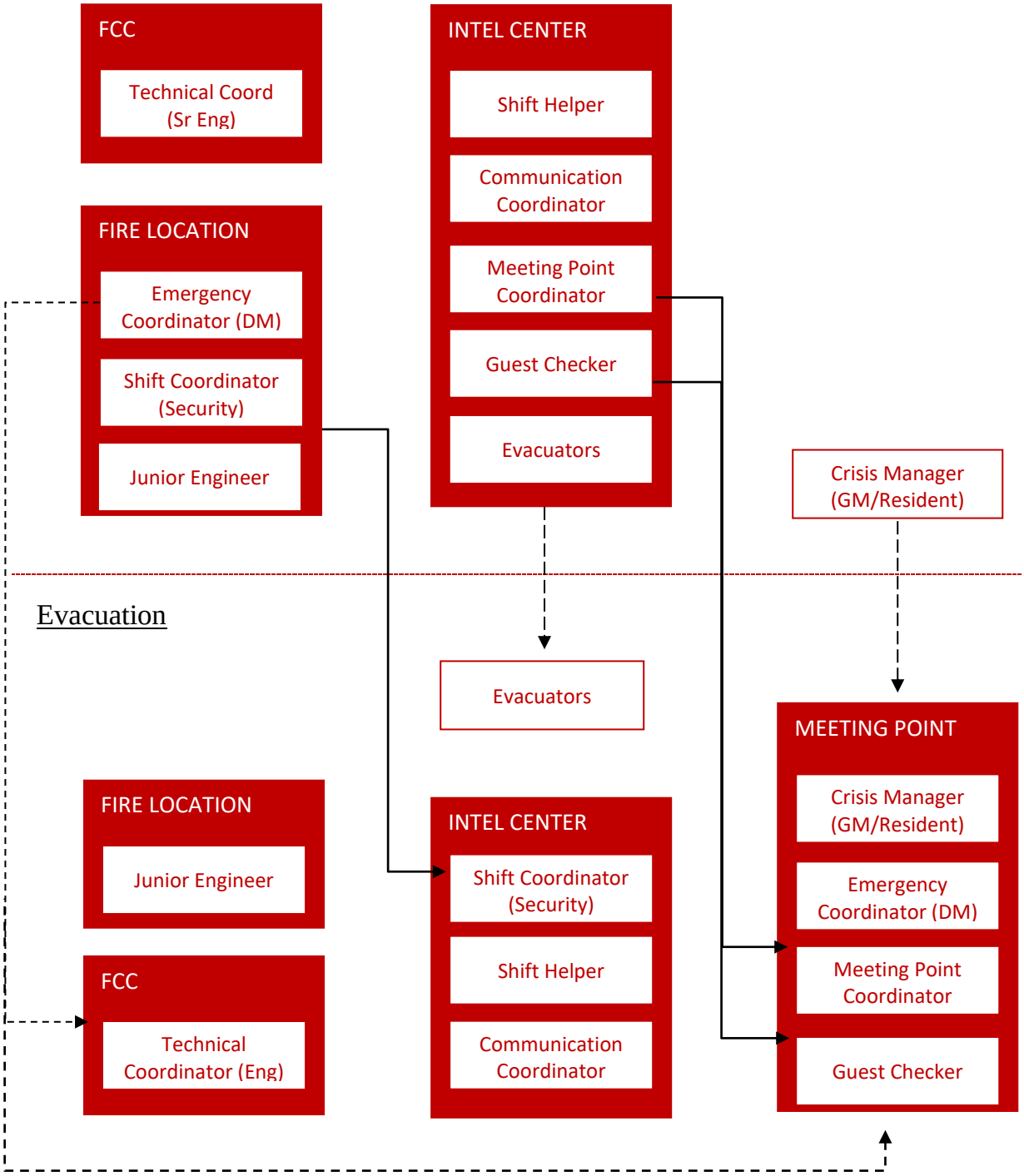
The Security Supervisor will move to the Intel center to get clipboard, walkie talkie and Shift Coordinator vest. Once all evacuators have left, they may choose to relocate to the FCC while they maintain a log of cleared areas. The Shift Helper will remain

with the Shift Coordinator / Security Supervisor, maintaining a log of activities and decisions. The Communication Coordinator will also remain in the Intel Center, answering phones and maintaining a log of calls.

The evacuators will proceed to their assigned areas, checking in each zone as they are cleared.

Movement Flowchart

<u>Fire Alarm</u>



First Aid Qualified Staff

Name	Department	Position
Nay Lin Tun	Kitchen - Chinese	Chef De Partie
Yar Zar Aung	Kitchen - Chinese	Demi Chef De Partie
Thant Wai Myo	Sales & Marketing	Sales Manager
Lei Lei Thinn	Front Office - GR	Asst. Guest Relation Manager
Wai Yan Phyo	Front Office	Guest Relations Officer
Myo San	Food & Beverage - The Square	Waiter
Nay San Oo	Kitchen - French	Commis I
Thiha Kyaw Htin	Kitchen - Bakery & Pastry	Commis I
Htike Htike	Housekeeping	Florist Supervisor
Win Min Thike	Kitchen - Chinese	Demi CDP
Saw Thet lynn	Safety Security & Risk	Security Guard
Min Zaw Aye	Safety Security & Risk	Supervisor
Naing Lin Aung	Safety Security & Risk	Security Officer
Myat Min	Safety Security & Risk	Supervisor

Emergency Coordinator / Duty Manager Tasks

Daily

- Complete the Emergency Response Team (ERT) Assignments sheet at the start of each shift.
- Give the list to the Communication Coordinator (Intel Center).

Fire alarm

- Proceed to location of fire, taking junior engineer with them if possible.
- If there is no fire, inform the Engineering Supervisor (Eng) in the Fire Control Center (FCC) it is a false alarm.
- If there is a fire, inform the Eng to raise the fire alarm and Security Supervisor to notify fire department.

False Alarm

- Collect all logs and carry out appropriate after action reports / investigation.

Evacuation

- Go to FCC, get clipboard, walkie talkie and Emergency Coordinator vest
- Stop in Intel Center if deemed necessary
- Proceed to Meeting Point when deemed appropriate
- Monitor situation from most appropriate location
- In coordination with Engineer, call for ‘Full Evacuation’ (i.e. all staff leave)

Shift Coordinator / Security Manager Tasks

Fire alarm

- Proceed to location of fire with Duty Manager and junior engineer.

False Alarm

- Return to Intel Center and ensure all vests (with all keys), clipboards, and walkie talkies are returned.

Evacuation

- Call fire department
- Go to Intel Center, get clipboard, walkie talkie and Shift Coordinator vest
- Make sure all evacuators check in and know their area
- When evacuators have all left Intel Center, relocate to FCC if appropriate
- Keep track of reports from evacuators about which zones are clear
- Provide clipboard notes to fire fighters once you evacuate

All Clear Checklist

Area		✔	Notes	
L1 All areas	1A		She Shine Gems & Jewelry Sevenfriday	Lucell
	1B			
	1Pod			
L2 & 3 All Areas	2A		Myanmar National League Myanmar Infratel	RGK + Z&A Group Remainder
	2B			
	2Pod			
	3A		Ngwe Sung Villa Shichida Myanmar Victory Resort Myanmar ICBC Bank Max Hotels Group	Max Myanmar Holding Co AYA Royal Banking Vestige Myanmar Milano Esmod Sampth Bank PLC
	3B		Barcode Bar	
	3Pod			
L4 Podium	4Pod			
L4 & 5 Tower A	4A		Takumi-Ya	
	5A			
L4 & 5 Tower B	4B		Rose Hill	
	5B		Agnes Lim (Fancy House)	
L5 & 6 Podium	5Pod			
	6Pod		Manida Spa F1 Fitness	
L6 & 7 Tower A	6A			
	7A			
L6 & 7 Tower B	6B			
	7B			
L8a & 8b Tower A	8a – A			
	8b – B			
L8 & 9 Tower B	8B			
	8B			
L9 &10 Tower A	9A			
	10A			
L10 & 11 Tower B	10B			
	11B			
L11 & 12 Tower A	11A			
	12A			
L12 & 14 Tower B	12B			
	14B			

L14 Tower A	14A		
L15&16&17 Tower B	15B		
	16B		
	17B		

Technical Coordinator / Engineering Supervisor Tasks

Fire alarm

- Send junior engineer to fire location to assist DM & Security Supervisor
- Proceed directly to FCC and maintain communication with DM and Security Supervisor
- Put on Technical Coordinator vest
- Locate Technical Coordinator / Eng clipboard and begin log
- Inform Communication Coordinator (Intel Center) to message Emergency Response Team to gather in Intel Center
- Ensure PA system is prepared for use

False Alarm

- Inform Communication Coordinator of false alarm
- Reset all systems and conduct follow up actions as appropriate

Evacuation

- Inform Communication Coordinator (CC) of fire alarm
- Ensure PA system evacuation message is played
- Ensure all elevators are grounded (except fire lifts)
- Maintain a log of actions
- Direct appropriate staff to turn off escalators, power, emergency generator
- Collect building structure / floor plans to bring in case of evacuation
- Monitor CCTV
- Monitor Fire Panel and make recommendation for ‘Full Evacuation’ (i.e. all staff leave)

Shift Helper Tasks

Fire alarm

- Go to Intel Center
- Locate vest, walkie talkie and clipboard
- Also locate Shift Coordinator clipboard
- Request code for safe, open up cabinet, hand out vests, ensure all have keys and instruction cards
- Take control of group of evacuators

False Alarm

- Return to duties

Evacuation

- If Shift Coordinator not present, give final instructions to evacuators on how to clear a room and how to call in.
- Help keep track of reports from evacuators
- Stay near Shift Coordinator, observe and log all decisions & activity
- Continue logging when evacuated - provide to Emergency Coordinator once event over

Crisis Manager / GM / Duty Resident

Fire alarm

- Go to Intel Center & get vest, and clipboard

False Alarm

- Return all items

Evacuation

- Go to Meeting Point
- Refer to Crisis card to contact all relevant outside organizations (GM, head office, embassies, etc)
- Assist MP Coordinator and Guest Checker to organize MP into four groups: STAFF, UNCHECKED, CHECKED, INJURED
- Get head counts from each department, noting any missing staff.
- Ensure driveway is kept clear
- Meet emergency responders and assist with crowd control etc

Meeting Point Coordinator Tasks

Fire alarm

- Save important documents from front office desk and lock up cash registers and take safety deposit keys, or task another FO to do so
- Go to Intel Center & get vest, clipboard and first aid kit and AED
- Review contents of first aid kit, re-read AED instructions

False Alarm

- Return all items and return to work

Evacuation

- Go to Meeting Point with first aid kit and AED
- Work with guest checker to organize MP into four groups: STAFF, UNCHECKED, CHECKED, INJURED
- Administer first aid if required
- Ensure driveway is kept clear
- Meet emergency responders and assist with crowd control etc
- Update firefighters on arrival on suspected missing

Guest Checker Tasks

Fire alarm

- Print Updated Guest List and check-ins list
- Make note of VIP guests and persons with special needs
- Go to Intel Center & get vest and clipboard

False Alarm

- Return all items and return to work

Evacuation

- Go to Meeting Point and work with Meeting Point Coordinator
- Divide guests into two groups: UNCHECKED and CHECKED – direct them to move groups once they've been checked off
- Advise Meeting Point Coordinator of any VIP guests or persons with special needs
- Hand write in any guests/visitors that check in that are not on guest list
- Provide clipboard notes and update fire fighters once they arrive

Communications Coordinator Tasks

Daily

- Alert everyone of their role in the Emergency Response Team, checking off each once they confirm.
- If any fail to confirm, the CC will alert the DM for follow up.

Fire alarm

- Go to Intel Center & get vest and clipboard
- Send out Comm Center Fire Alarm Message (Hotsys)
- Begin logging both incoming and outgoing communications – note any incoming calls, make note of if they need to be called back

False Alarm

- Send out Comm Center False Alarm Message (Hotsys)
- Call back anyone who needs a call back to confirm it was a false alarm
- Log all incoming and outgoing communications

Evacuation

- Send out Comm Center Evacuation Message (Hotsys)
- Contact any ERT members who have not arrived in Intel Center
- Remind security personnel to announce on each walkie-talkie channel say "Emergency Code 1, go to channel 1, ERT report to Intel Center"
- Remind security personnel that someone needs to call fire department
- Call back anyone who needs a call back to confirm they need to evacuate
- Log all incoming and outgoing communications

Key Messages

Fire Alarm
We have had a fire alarm go off and our firefighting team is investigating. Please wait and we will advise you of the situation as soon as possible.

False Alarm
We had a fire alarm go off, but have confirmed it was a false alarm. We apologize for any inconvenience.

Evacuation
We have confirmed there is a fire on floor ## and we are now evacuating the building. Please proceed calmly to the assembly area in the parking lot on Pyay Road in front of the hotel.

Fire Response Instructions

These instructions should be posted by the doors of all major spaces

Office Spaces / Basement

IN CASE OF FIRE / EMERGENCY CODE 1

- Stop all activities
- ERT – report to Intel Center
- Lock up all valuables
- Close doors & windows, turn off power & air conditioning
- Gather all staff from area and go to Meeting Point
- USE FIRE EXITS ONLY

Spa

IN CASE OF FIRE / EMERGENCY CODE 1

- Stop all activities
- ERT – report to Intel Center
- Instruct guests to go to Meeting Point – have one staff join them
- Lock up all valuables
- Pick up guest sign-in sheet
- Check all bathrooms / saunas / guest areas
- Close doors & windows, turn off power, steam rooms, air conditioning
- Put sign on door: CODE 1 – Area cleared
- Gather remaining staff and guests from area and go to Meeting Point
- USE FIRE EXITS ONLY

Front Office

IN CASE OF FIRE / EMERGENCY CODE 1

- Stop all activities
- Lock up all valuables
- ERT – Print off guest list and check-ins list and report to Intel Center
- Direct guests towards Meeting Point
- Close any doors & windows
- Gather remaining staff and guests from area and go to Meeting Point
- USE FIRE EXITS ONLY

Banquet Halls

IN CASE OF FIRE / EMERGENCY CODE 1

- Stop all activities
- ERT – report to Intel Center
- Instruct guests to go to Meeting Point – have one staff join them
- Lock up all valuables
- Check all bathrooms / back halls / etc
- Close doors & windows, turn off power, appliances, air conditioning
- Put sign on door: CODE 1 – Area cleared
- Gather remaining staff and guests from area and go to Meeting Point
- USE FIRE EXITS ONLY

Kitchens

IN CASE OF FIRE / EMERGENCY CODE 1

- Stop all activities
- ERT – report to Intel Center
- Instruct guests to go to Meeting Point – have one staff join them
- Lock up all valuables
- Check all fridges, storage rooms, etc
- Turn off main gas supply valves, stoves, grills, ovens, exhaust fans
- Close doors & windows, turn off power, appliances, air conditioning
- Put sign on door: CODE 1 – Area cleared
- Gather remaining staff and guests from area and go to Meeting Point
- USE FIRE EXITS ONLY

Food & Beverage Outlets

IN CASE OF FIRE / EMERGENCY CODE 1

- Stop all activities
- Instruct guests to go to Meeting Point – have one staff join them
- Lock up all valuables
- Check all fridges, storage rooms, etc
- Turn off main gas supply valves, stoves, grills, ovens, exhaust fans
- Close doors & windows, turn off power, appliances, air conditioning
- Put sign on door: CODE 1 – Area cleared
- Gather remaining staff and guests from area and go to Meeting Point
- USE FIRE EXITS ONLY

Room Service

IN CASE OF FIRE / EMERGENCY CODE 1

- Stop all activities – hold outgoing services
- "A fire alarm has gone off on floor XX and our response team is investigating. We apologize for the delay and will advise when the situation has been resolved" – Note room number for return call.
- Lock up all valuables
- Check all fridges, storage rooms, etc
- Turn off main gas supply valves, stoves, grills, ovens, exhaust fans
- Close doors & windows, turn off power, appliances, air conditioning
- Put sign on door: CODE 1 – Area cleared
- Gather remaining staff and guests from area and go to Meeting Point
- USE FIRE EXITS ONLY

Tenants

IN CASE OF FIRE / EMERGENCY CODE 1

- Stop all activities
- Instruct guests to go to Meeting Point – have one staff join them
- Lock up all valuables
- Check all bathrooms / backrooms / etc
- Close doors & windows, turn off power & air conditioning
- Put sign on door: CODE 1 – Area cleared
- Gather remaining staff and guests from area and go to Meeting Point
- USE FIRE EXITS ONLY

Evacuator Cards

Card Fronts – Individual Instructions

Emergency Coordinator (Duty Manager)

- Monitor situation from most appropriate location
- Go to FCC to ensure evacuation underway
- Stop in Intel Center if desired, proceed to Meeting Point
- Monitor situation from most appropriate location
- In coordination with Engineer, call for 'Full Evacuation' (i.e. all staff leave)

Shift Coordinator (Security Supervisor)

- Call the Fire Department to confirm actual fire
- Make sure all evacuators check in and know their area
- When evacuators have all left Intel Center, relocate to FCC if appropriate
- Keep track of reports from evacuators about which zones are clear
- Provide clipboard notes to fire fighters once you evacuate

Technical Coordinator (Engineer Supervisor)

- Inform Communication Coordinator (CC) of fire alarm
- Ensure PA system evacuation message is played
- Ensure all elevators are grounded (except fire lifts)
- Maintain a log of actions
- Direct appropriate staff to turn off escalators, power, emergency generator
- Collect building structure / floor plans to bring in case of evacuation
- Monitor CCTV
- Monitor Fire Panel and make recommendation for 'Full Evacuation' (i.e. all staff leave)

Crisis Coordinator (GM/Duty Resident)

- Go to Meeting Point
- Refer to Crisis card to contact all relevant outside organizations (GM, head office, embassies, etc)
- Assist MP Coordinator and Guest Checker to organize MP into four groups: STAFF, UNCHECKED, CHECKED, INJURED
- Get head counts from each department, noting any missing staff.
- Ensure driveway is kept clear
- Meet emergency responders and assist with crowd control etc

Shift Helper (Security)

- Make sure Shift Coordinator has all-clear checklist

- If Shift Coordinator not present, give final instructions to evacuators on how to clear a room and how to call in.
- Help keep track of reports from evacuators
- Stay near Shift Coordinator, observe and log all decisions & activity
- Continue logging when evacuated - provide to Emergency Coordinator once event over

Meeting Point Coordinator

- Review contents of first aid kit, re-read AED instructions
- Go to Meeting Point with first aid kit and AED
- Work with guest checker to organize MP into four groups: STAFF, UNCHECKED, CHECKED, INJURED
- Administer first aid if required
- Ensure driveway is kept clear
- Meet emergency responders and assist with crowd control etc
- Update firefighters on arrival on suspected missing

Guest Checker

- Print Updated Guest List and check-ins list
- Make note of VIP guests and persons with special needs
- Go to Meeting Point and work with Meeting Point Coordinator
- Divide guests into two groups: UNCHECKED and CHECKED – direct them to move groups once they've been checked off
- Advise Meeting Point Coordinator of any VIP guests or persons with special needs
- Hand write in any guests/visitors that check in that are not on guest list
- Provide clipboard notes and update fire fighters once they arrive

Communications Coordinator

- Send out Comm Center Fire Alarm Message (Hotsys)
- Contact any ERT members who have not arrived in Intel Center
- Remind security personnel to announce on each walkie-talkie channel say "Emergency Code 1, go to channel 1, ERT report to Intel Center"
- Remind security personnel that someone needs to call fire department
- Begin logging both incoming and outgoing communications – note any incoming calls, make note of if they need to be called back
- Call back anyone who needs a call back to confirm they need to evacuate

Evacuators

- Go to Assigned area using staircase
- Guest rooms – knock then open.

- "We have confirmed there is a fire on floor ## and we are now evacuating the building. Please proceed calmly to the assembly area in the parking lot on Pyay Road in front of the hotel using the fire escape located (where)"
- Mark door "C" for cleared
- Radio when each zone or floor is cleared. Radio in any rooms you cannot clear because they are locked or dangerous.
- Listen for orders to evacuate completely
- When done, report to Shift Coordinator

Equipment (All)

Master key & Master card, Pen, chalk, walkie talkie, torch, clipboard (if coordinator)

Card Backs - Key Messages for Guests

Fire Alarm

We have had a fire alarm go off on floor XX and our firefighting team is investigating. Please wait and we will advise you of the situation as soon as possible.

False Alarm

We had a fire alarm go off on floor XX, but have confirmed it was a false alarm. We apologize for any inconvenience.

Evacuation

We have confirmed there is a fire on floor ## and we are now evacuating the building. Please proceed calmly to the assembly area in the parking lot on Pyay Road in front of the hotel.

PRO LAB
ANALYTICAL LABORATORY

Myanmar Innovation Group of Co., Ltd
Address : No. (9), Sabae Housing, Pyi Htaung Su Road,
(26) Ward, South Dagon Tsp, Yangon, Myanmar.
Tel : 09-893 767 424
E-mail : info@prolabmyanmar.com

LABORATORY ANALYSIS REPORT

1	Client Name	: Novotel Yangon Max Hotel Service Project
2	Location	: No. (65 - 66 B), Pyay Road, Kamayut Tsp, Yangon, Myanmar
3	Type of Sample	: Effluent Water
4	Sample No.	: 01241/2024
5	Contact Person	: Eguard Environmental Services
6	Phone No.	: 09-797005212
7	Date Received	: 03.10.2024
8	Date of Test Performed	: 03.10.2024
9	Date of Issued	: 11.10.2024
10	Result	:

No.	Parameter	Result	Unit	WHO STD 2018	Method
1	Oil and Grease	38	mg/L	-	[a] 5520D, Soxhlet Extraction Method
2	Total Coliform	< 0.3	MPN/ml	-	FDA-BAM: MPN Method

Remark:

This certificate is issued only for the receipt of the test sample.
Dispose treated waste water according to state and local regulations.

[a] American Public Health Association, Standard Methods for the Examination of Water and Wastewater.

Tested By
Name : NAW EH THA KU
Position : Laboratory Technician
Signature :.....

Myanmar Innovation Group of Co., Ltd. PRO LAB

Approved By
Name : THEMAR WINT
Position : Laboratory Manager
Signature :.....

The Government of the Republic of the Union of Myanmar

Ministry of Natural Resources and Environmental Conservation

Department of Forest

Forest Research Institute

Water Quality Laboratory, Yezin

Ref : WQL/0406/2024

Date: 30-10-2024

ANALYTICAL TEST REPORT

Project Name: **Novotel Yangon Max Hotel Project**

Customer Address : U Ye Chit Zaw (Eguard)

Assignment number	2024-121-1	Sampling Location	
Sample name	**EW**	Sampling Date	-
Sample type	**Effluent Water**	Sample received date	3-10- 2024
Comments			

Parameter	Result	Unit	Method reference	Instruments
pH	6.56	-	ISO 10523:2008	ManTech Robot (PC-1300-475E)
Temperature	27.43	-	ISO 10523:2008	ManTech Robot (PC-1300-475E)
Total Suspended Solid	55	mg/L	NS 4733:1983/NS-EU 872:2005	Circulation and Filtration System
Total Phosphorus	167.38	ug/L	NS 4725	SFA(SKALAR SAN plus Analyzer) SA 3000/5000,SA 1100
Total Nitrogen	1.12	mg/L	Kjeldahl Method	Kjeldahl Digestion and Distillation Unit
BOD	1.61	*mg/L*	Potetiometric	YSI Pro DO Tester
COD	36	*mg/L*	Titrimetric	Titrator

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature :

Name : Dr. Thida Cho
Assistant Research Officer

Approved by

Signature :

Name : Dr. Thida Swe
Assistant Research Officer

PRO LAB
ANALYTICAL LABORATORY

Myanmar Innovation Group of Co., Ltd
Address : No. (9), Sabae Housing, Pyi Htaung Su Road,
(26) Ward, South Dagon Tsp, Yangon, Myanmar.
Tel : 09-893 767 424
E-mail : info@prolabmyanmar.com

LABORATORY ANALYSIS REPORT

1	Client Name	: Novotel Yangon Max Hotel Service Project
2	Location	: No. (65 - 66 B), Pyay Road, Kamayut Tsp, Yangon, Myanmar
3	Type of Sample	: Ground Water
4	Sample No.	: 01240/2024
5	Contact Person	: Eguard Environmental Services
6	Phone No.	: 09-797005212
7	Date Received	: 03.10.2024
8	Date of Test Performed	: 03.10.2024
9	Date of Issued	: 11.10.2024
10	Result	:

No.	Parameter	Result	Unit	WHO STD 2018	Method
1	Calcium Hardness	10.00	mg/L	NA	[a] 3500-Ca B, EDTA Titrimetric Method
2	Iron	0.48	mg/L	0.3 mg/L	[a] 3500-F B, Phenanthroline Method
3	Magnesium Hardness	54.00	mg/L	NA	[a] 3500-Mg B, EDTA Titrimetric Method
4	Phosphate	0.03	mg/L	NA	[a] 4500E, Ascorbic Acid Method
5	Sodium Chloride	47.79	mg/L	NA	[a] 4500-Cl⁻ B, Argentometric Method
6	Suspended Solids	3	mg/L	NA	[a] 2540D, Total Suspended Solids Dried at 103-105°C
7	Total Hardness	64.00	mg/L	500 mg/L	[a] 2340C, EDTA Titrimetric Method
8	Total Solids	106	mg/L	NA	[a] 2540D, Total Suspended Solids Dried at 103-105°C and Calculation Method

Remark:

This certificate is issued only for the receipt of the test sample.

[a] American Public Health Association, Standard Methods for the Examination of Water and Wastewater.

Tested By
Name : NAW EH THA KU
Position : Laboratory Technician
Signature :.....

Myanmar Innovation Group of Co., Ltd PRO LAB

Approved By
Name : THEMAR WINT
Position : Laboratory Manager
Signature :.....

The Government of the Republic of the Union of Myanmar

Ministry of Natural Resources and Environmental Conservation

Department of Forest

Forest Research Institute

Water Quality Laboratory, Yezin

Ref : WQL/0407/2024

Date: 30g-10-2024

ANALYTICAL TEST REPORT

Project Name: **Novotel Yangon Max Hotel Project**

Customer Address : U Ye Chit Zaw (Eguard)

Assignment number	2024-121-2	Sampling Location	
Sample name	**GW**	Sampling Date	-
Sample type	**Ground Water**	Sample received date	3-10- 2024
Comments			

Parameter	Result	Unit	Method reference	Instruments
Carbonate	ND	-	Titrimetric	Titrator
Bicarbonate	85.40	-	Titrimetric	Titrator
Sulphate	6.60	mg/L	ISO 10304-1: 2009	Ion Chromatography (Thermo Scientific, DIONEX AQUION
Chloride	24.36	mg/L	ISO 10304-1: 2009	Ion Chromatography (Thermo Scientific, DIONEX AQUION
Color	ND	mg Pt/l	ISO 7887:2011	ManTech Robot (UV mini - 1240)
Total Alkalinity	0.632	mmol/l	ISO 9963-1:1996	ManTech Conductivity, Model 4510 Conductivity/TDS meter

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature :

Name : Dr. Thida Cho
Assistant Research Officer

Approved by

Signature :

Name : Dr. Thida Swe
Assistant Research Officer

NOVOTEL YANGON MAX HOTEL
စီမံကိန်းအကြောင်းအရာများရှင်းလင်းတင်ပြခြင်း

၂၁ ရက်၊ မေလ၊ ၂၀၂၅ ခုနှစ်

NOVOTEL

Max (Myanmar) Hotel Company Limited ၏ Novotel Yangon Max Hotel
နိုင်ငံတကာအဆင့်မီ ဟိုတယ်လုပ်ငန်းဝန်ဆောင်မှု စီမံကိန်းဆိုင်ရာ အချက်အလက်များ

ကုမ္ပဏီမှတ်ပုံတင်အမှတ်	၁၄၁၄၃၃၂၃၂၂
ရက်စွဲ	၂၀၀၆ ခုနှစ်၊ ဇန္နဝါရီလ၊ ၅ရက်
လိပ်စာ	အမှတ် (၄၅၉)၊ (၈) ရပ်ကွက်၊ ကမာရွတ်မြို့နယ်၊ ပြည်လမ်း၊ ရန်ကုန်မြို့။


Certificate of Incorporation
MAX (MYANMAR) HOTEL COMPANY LIMITED
Company Registration No. 141433423
This is to certify that MAX (MYANMAR) HOTEL COMPANY LIMITED was incorporated under the Myanmar Companies Act 1914 on 5 January 2006 as a Private Company Limited by Shares.

NOVOTEL

Max (Myanmar) Hotel Company Limited ၏ Novotel Yangon Max Hotel
နိုင်ငံတကာအဆင့်မီ ဟိုတယ်လုပ်ငန်းဝန်ဆောင်မှု စီမံကိန်းဆိုင်ရာ အချက်အလက်များ

ကုမ္ပဏီအမည်	Max (Myanmar) Hotel Company Limited
စီမံကိန်းအမျိုးအစား	ဟိုတယ်ဝန်ဆောင်မှုလုပ်ငန်း
ရင်းနှီးမြှုပ်နှံမှုပမာဏ	၅၆၉၀၀ သန်း (အမေရိကန်ဒေါ်လာ ၂၃ သန်း)
ရင်းနှီးမြှုပ်နှံမှုအမျိုးအစား	Private Company Limited by Shares
ရင်းနှီးမြှုပ်နှံမည့်ကာလ	(၁၅) နှစ်
မြေဧရိယာ	(၄.၁၁) ဧက
စီမံကိန်းတည်နေရာ	အမှတ် (၄၅၉)၊ (၈) ရပ်ကွက်၊ ကမာရွတ်မြို့နယ်၊ ပြည်လမ်း၊ ရန်ကုန်မြို့။
စီမံကိန်းအဆိုပြုသူ	ဦးဘိုချန်ထွန်း (မန်နေးဂျင်းဒါရိုက်တာ)

NOVOTEL

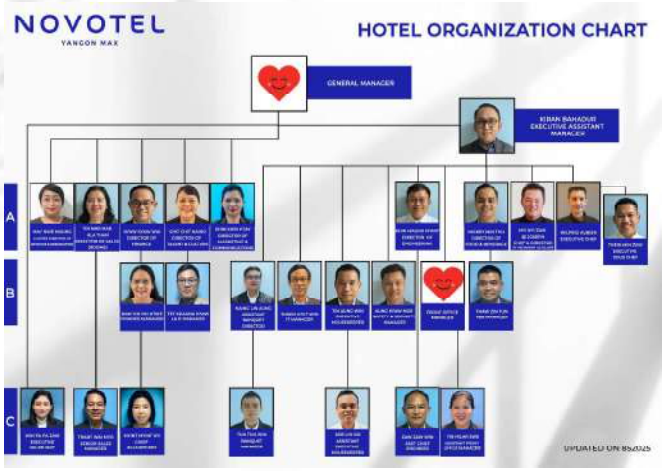
Max (Myanmar) Hotel Company Limited ၏ Novotel Yangon Max Hotel
နိုင်ငံတကာအဆင့်မီ ဟိုတယ်လုပ်ငန်းဝန်ဆောင်မှု စီမံကိန်းဆိုင်ရာ အချက်အလက်များ

တည်နေရာ - အမှတ် (၄၅၉)၊ (၈) ရပ်ကွက်၊
ကမာရွတ်မြို့နယ်၊ ပြည်လမ်း၊ ရန်ကုန်မြို့။

မြောက်လတ္တီတွဒ် - ၁၆° ၄၉' ၁၂.၂၅''
အရှေ့လောင်ဂျီကျူ - ၉၆° ၇' ၅၄.၆၈''

စီမံကိန်းဧရိယာ - ၄.၁၁ ဧက

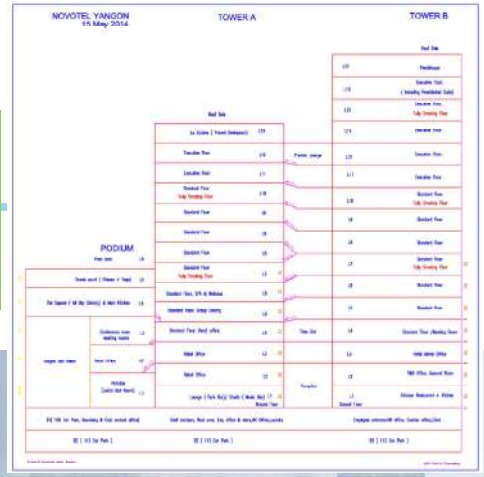
Max (Myanmar) Hotel Company Limited ၏ Novotel Yangon Max Hotel ဖွဲ့စည်းပုံပြဇယား



အခန်းအရေအတွက်နှင့် အဆောက်အဦးအမျိုးအစား

အခန်းအရေအတွက် - (၃၆၆) ခန်း
အဆောက်အဦအမျိုးအစား - Twin Tower

Tower (A) – 14 floors
Tower (B) – 16 floors



အခန်းအမျိုးအစား

Deluxe Room

Executive Suite Room

အခန်းအမျိုးအစား

Premier Suite

Presidential Suite

အသုံးပြုမည့် ပစ္စည်းများနှင့် အရင်းအမြစ်များ

NOVOTEL

လျှပ်စစ်ရယူအသုံးပြုမှု

စီမံကိန်းအတွက် တစ်လလျှင် လျှပ်စစ်ဓာတ်အား 750,000 kWh လိုအပ်ပြီး ရန်ကုန်လျှပ်စစ်ဓာတ်အား ဖြန့်ဖြူးရေး လုပ်ငန်းမှ အဓိကရယူသုံးစွဲလျက်ရှိပါသည်။

လောင်စာဆီအသုံးပြုမှု

ဟိုတယ်ဝန်ဆောင်မှုလုပ်ငန်းများ အချိန်နှင့်တပြေးညီ လုပ်ဆောင်ရန်အတွက် 1660 kVA ရှိသော မီးစက် (၃) လုံးကိုလည်း အသုံးပြုသွားမည်ဖြစ်ပါသည်။ လောင်စာဆီအနေဖြင့် မီးစက်အတွက် ဒီဇယ်ဆီအား တစ်လလျှင် ၁၃,၂၀၈ ဂါလံခန့် လိုအပ်ချက်ပေါ်မူတည်၍ အသုံးပြုသွားမည်ဖြစ် ယာဉ်များနှင့် မီးပျက်ချိန်ပေါ်မူတည်၍ မီးစက်အသုံးအတွက် စုစုပေါင်း ၃၆၀၀ ဂါလံခန့် သိုလှောင်သွားမည်ဖြစ်ပါသည်။ ဆန့်သည့် သိုလှောင်ကန်တွင်လည်း အရေးပေါ်ကိစ္စများတွင် အသုံးပြုရန်အတွက် သိုလှောင်ထားမည် ဖြစ်ပါသည်။

ရေအရင်းအမြစ်အသုံးချမှု

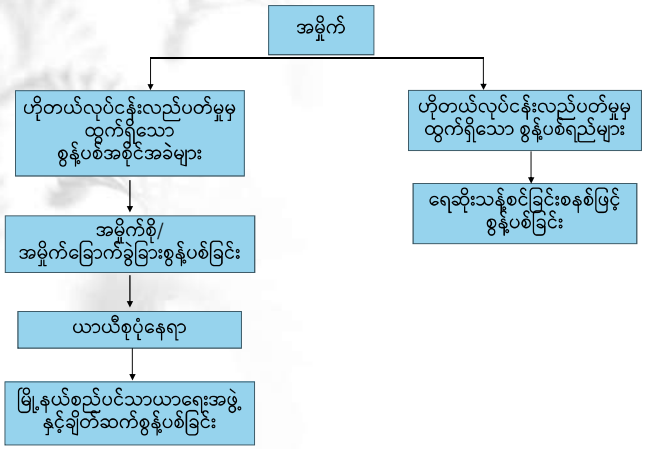
NOVOTEL

- ဟိုတယ်ဝန်ဆောင်မှုလုပ်ငန်းတစ်ခုလုံး လည်ပတ်နိုင်ရန်အတွက် တစ်လလျှင် ရေဂါလံ (၁,၆၅၀,၀၀၀) လိုအပ်သည်။
- အဓိကအားဖြင့် ရေကို အချင်း ၈ လက်မနှင့် အနက်ပေ ၃၆၀ ရှိ အဝိစိတွင်း ၃ တွင်း နှင့် ရန်ကုန်မြို့တော် စည်ပင်သာယာရေး ကော်မတီမှ ဖြန့်ဝေပေးသည့် ရေတို့မှ ရယူသုံးစွဲပါသည်။
- ဟိုတယ်လုပ်ငန်းလည်ပတ်မှုအတွက် ရေသန့်စင်စနစ်ဖြင့်သန့်စင်ကာ အသုံးပြုသည်။
- သောက်သုံးရေအတွက် ရေသန့်ကိုသာ သုံးစွဲပါသည်။



အမှိုက်စီမံခန့်ခွဲမှုအစီအစဉ်

NOVOTEL



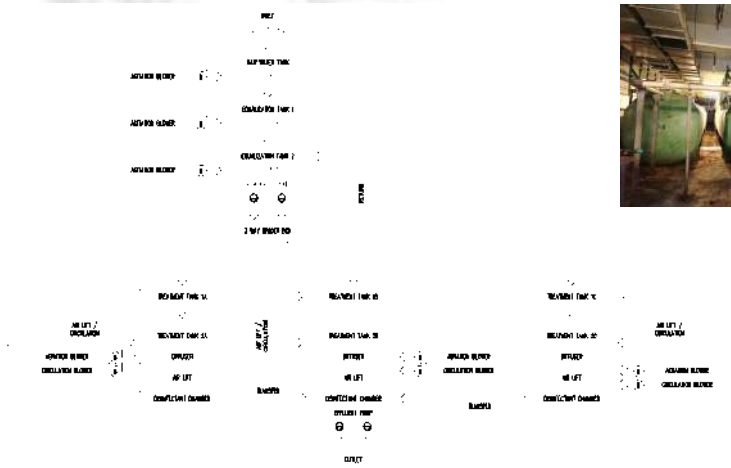
ဟိုတယ်လုပ်ငန်းလည်ပတ်မှုမှ ထွက်ရှိသော စွန့်ပစ်အစိုင်အခဲများအား စွန့်ပစ်မှုစနစ်

NOVOTEL






ဟိုတယ်လုပ်ငန်းလည်ပတ်မှုမှ ထွက်ရှိသော စွန့်ပစ်ရည်များအတွက် ရေဆိုးသန့်စင်မှုစနစ်



လူမှုရေးဆိုင်ရာတာဝန်ခံဆောင်ရွက်မှုအစီအစဉ် (CSR Plan)

- ဟိုတယ်မှရရှိသော အကျိုးအမြတ်များအနက် အချို့ကို လူမှုရေးအကျိုးပြုလုပ်ငန်းများအတွက် သီးသန့်ခွဲဝေအသုံးပြုပါသည်။ ထို့အပြင် လစဉ် (၂၁) ရက်နေ့တိုင်း ဝန်ထမ်းအားလုံး ပူးပေါင်းပါဝင်ကာ တစ်ရက်တာ အသားစားခြင်းကို ရှောင်ကြဉ်ပြီး၊ ထိုသို့ရှောင်ကြဉ်ရာမှ ရရှိလာသော ငွေကြေးများလည်း ဤအစီအစဉ်အတွက် ပါဝင်ပါသည်။
- ပညာရေး၊ ကျန်းမာရေး၊ ပရဟိတလုပ်ငန်းများ၊ သဘာဝဘေးအန္တရာယ်ကျရောက်ခြင်းနှင့် အခြားလူမှုရေးကိစ္စအဝဝတို့တွင်လည်း အသုံးပြုသွားမည်ဖြစ်ပါသည်။ ထို့အပြင် သဘာဝဘေးအန္တရာယ်များ ကျရောက်သည့် ဒေသများအတွက် လှူဒါန်းသွားနိုင်ရန်လည်း စီစဉ်ထားရှိပါသည်။

လူမှုရေးဆိုင်ရာတာဝန်ခံဆောင်ရွက်မှုအစီအစဉ်မှတ်တမ်းများ (CSR Activity)

ဝန်ထမ်းများအတွက် စီမံထားရှိသည့် ဝန်ဆောင်မှုများ

- ဝန်ထမ်းများကို ဟိုတယ်လုပ်ငန်းနှင့်ပတ်သက်၍ သင်တန်းပေးခြင်း၊ ကျွမ်းကျင်ဝန်ထမ်းများကို ပိုမိုကျွမ်းကျင်လာစေရန်နှင့် စွမ်းဆောင်ရည်နှင့်ကျွမ်းကျင်မှု ပိုမိုမြင့်မားလာစေရန် ပြည်ပသို့စေလွှတ်၍ သင်တန်းများပေးခြင်း၊ ယင်းသို့ သင်တန်းများ ပေးရာတွင်လည်း ကုန်ကျမည့် ကုန်ကျစရိတ်များတွင် အသုံးပြုသွားနိုင်ရန် စီစဉ်ထားရှိပါသည်။

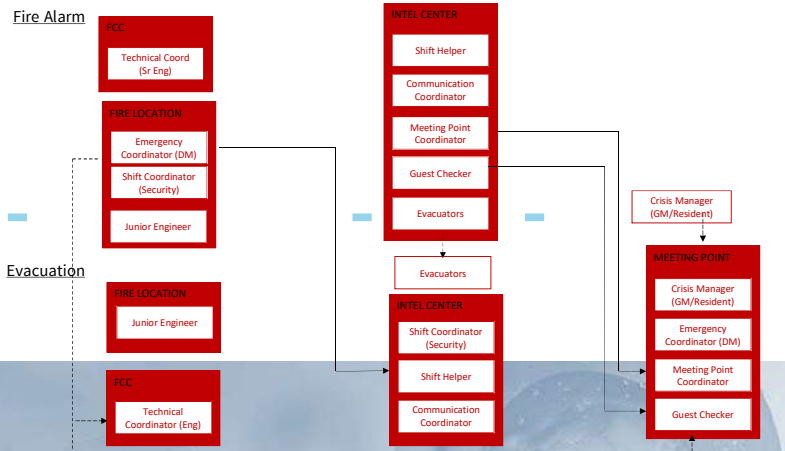
ဝန်ထမ်းများအတွက် စီမံထားရှိသည့် ဝန်ဆောင်မှုများ

ဝန်ထမ်းများအတွက် စီမံထားရှိသည့် စွမ်းဆောင်ရည်နှင့်ကျွမ်းကျင်မှု သင်တန်းများ

အရေးပေါ်အခြေအနေကြိုတင်ကာကွယ်ခြင်း

- အဆောက်အဦးတစ်ခုလုံးတွင် မီးအချက်ပြသတိပေးမှုနှင့် အရေးပေါ်အခြေအနေများအတွက် ထိရောက်သော မီးထိန်းချုပ်မှုစနစ်များကို တပ်ဆင်ထားသည်။
- အဆောက်အဦးအထပ်တိုင်းတွင် မီးခိုးဖမ်းကိရိယာများ၊ အပူရှာဖွေကိရိယာများ၊ အချက်ပေး ခေါ်ဆိုမှုစနစ်နှင့် အသံပေးစနစ်များ တပ်ဆင်ထားပြီး ပင်မမီးထိန်းချုပ်မှုစနစ်သို့ ပေးပို့အချက်ပေးမှုများကို ဖြစ်ပေါ်စေသည်။
- မီးဘေးအန္တရာယ်ကျရောက်ပါက မီးငြှိမ်းသတ်သည့်စနစ်တွင် အလိုအလျောက်ရေဖျန်းပေးခြင်း၊ မီးသတ်ပိုက် (၁၀၆) ပိုက်နှင့် မီးသတ်ရေပိုက်ခေါင်း (၇) ခု တပ်ဆင်ထားသည်။ မီးသတ်ဆေးဘူး (၃၃၆) လုံးကိုလည်း နေရာအနှံ့ထားရှိထားသည်။

အရေးပေါ်အခြေအနေကြိုတင်ကာကွယ်ခြင်းနှင့်တုံ့ပြန်ခြင်းအစီအစဉ်



Novotel Yangon Max ဟိုတယ်ဝန်ဆောင်မှုလုပ်ငန်းစီမံကိန်း

ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း (Initial Environmental Examination –IEE) ဆိုင်ရာ

အချက်အလက်များ ရှင်းလင်းတင်ပြခြင်းနှင့်

အများပြည်သူနှင့်တိုင်ပင်ဆွေးနွေးခြင်းအခမ်းအနား

မေလ (၂၁) ရက်၊ ၂၀၂၅ ခုနှစ်

ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း

(Initial Environmental Examination)

Guard Environmental Services

မာတိကာ

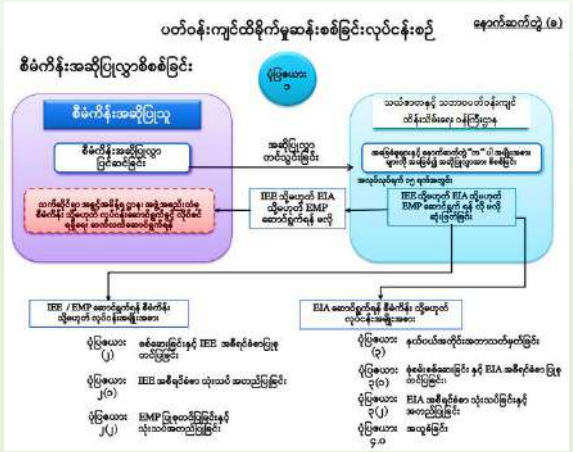
IEE ဆောင်ရွက်ရန်လိုအပ်ချက်များ

ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဆိုင်ရာ ဥပဒေ၊ နည်းဥပဒေနှင့် လုပ်ထုံးလုပ်နည်းများ

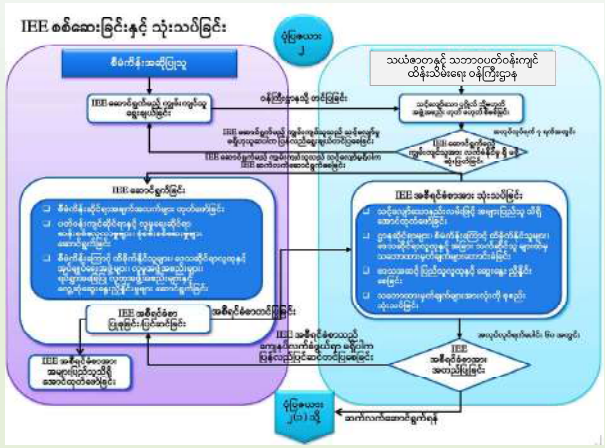
- ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဥပဒေ (၂၀၁၂ ခုနှစ်) နှင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးနည်းဥပဒေများ (၂၀၁၄ ခုနှစ်) အရ စီမံကိန်းများကို စိစစ်ရာတွင် စီမံကိန်းကြောင့် ဖြစ်ပေါ်လာနိုင်မည့် ပတ်ဝန်းကျင်နှင့် လူမှုရေးဆိုင်ရာ မလိုလားအပ် သည့် ထိခိုက်မှုများရှိ/မရှိနှင့် ထိခိုက်မှုများရှိခဲ့ပါကလည်း သိသာထင်ရှားမှုရှိ/မရှိ (သို့) ပြင်းထန်သောထိခိုက်မှု ရှိ/မရှိ စသည်ဖြင့် စနစ်တကျဆန်းစစ်နိုင်ရန် ရည်ရွယ်၍ ပြုလုပ်ရခြင်းဖြစ်ပါသည်။

- ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးနည်းဥပဒေ ၅၅ (က) အရ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် ရေးဆွဲတင်ပြရန် လိုအပ်သည့် စီမံကိန်းအမျိုးအစား (သို့မဟုတ်) ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း အပိုဒ် ၂၄ အရ ဝန်ကြီးဌာနက ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ် ရေးဆွဲတင်ပြရန် လိုအပ်ကြောင်းသတ်မှတ်သည့် စီမံကိန်းအမျိုးအစားအတွက် စီမံကိန်းအဆိုပြုသူသည် ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းနှင့် အစီရင်ခံစာပြုစုခြင်းကို မိမိကိုယ်တိုင်သော်လည်းကောင်း၊ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း အပိုဒ် ၁၈ နှင့်အညီ လုပ်ငန်းလိုင်စင်ရယူထားသော ပုဂ္ဂိုလ် သို့မဟုတ် အဖွဲ့အစည်းကို ခန့်အပ်၍သော်လည်းကောင်း ဆောင်ရွက်နိုင်သည်။

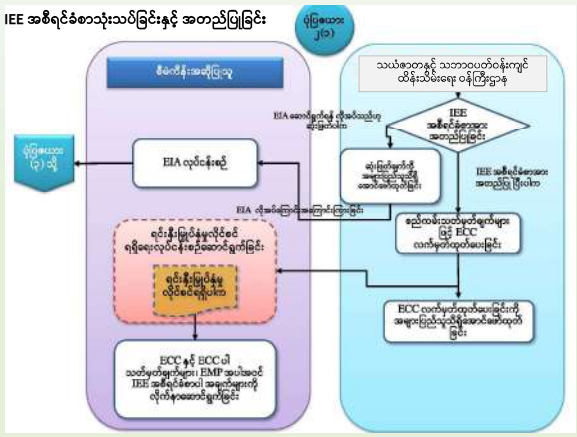
IEE ဆောင်ရွက်ရန်လိုအပ်ချက်များ



IEE ဆောင်ရွက်ရန်လိုအပ်ချက်များ



IEE ဆောင်ရွက်ရန်လိုအပ်ချက်များ



ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း ဆောင်ရွက်မည့် တတိယအဖွဲ့အစည်းနှင့် စိစစ်ခွင့်ပြုသည့် အစိုးရအဖွဲ့အစည်း

စိစစ်ခွင့်ပြုသည့် အစိုးရအဖွဲ့အစည်း

ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဝန်ကြီးဌာန (MONREC)

Environmental Conservation Department ECD

ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း ဆောင်ရွက်သည့် တတိယအဖွဲ့အစည်း

E Guard Environmental Services

တတိယအဖွဲ့အစည်း၏ လိုင်စင်အထောက်အထား

- သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၏ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း နှင့် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းပြုလုပ်သည့် တတိယပုဂ္ဂိုလ် (သို့) အဖွဲ့အစည်းများ လုပ်ငန်းလိုင်စင်ဆိုင်ရာ လုပ်ထုံးလုပ်နည်းအရ

E Guard သည် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနမှ တရားဝင်ခွင့်ပြုထားသည့် အကြံပေးအဖွဲ့အမျိုးအစား (က) လိုင်စင်နံပတ် EIA-CO(A)001/2023 (ထပ်တိုး) ဖြင့် လုပ်ငန်းလိုင်စင်

တတိယအဖွဲ့အစည်း၏ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ငန်းလိုင်စင် (အဖွဲ့အစည်း) လက်မှတ်

E Guard မှ ဆောင်ရွက်ခွင့်ရှိသော လုပ်ငန်းအမျိုးအစားများ

လုပ်ငန်းအမျိုးအစား (၁၅၇) မျိုးရှိသည့်အနက် -

- အဖွဲ့အစည်းမှ လေ့လာဆန်းစစ်ခွင့်ရသော စီမံကိန်းအမျိုးအစားပေါင်းမှာ **(၁၅၅) မျိုး** ဖြစ်ပါသည်။
- လုပ်ငန်းလိုင်စင်ဆိုင်ရာလုပ်ထုံးလုပ်နည်းအရ

E Guard ဝန်ထမ်းများအနက် လိုင်စင်ကိုင်ဆောင်ရရှိထားသူများမှာ

- အကြံပေးပုဂ္ဂိုလ် (၁၆) ဦး
- တွဲဖက်အကြံပေးပုဂ္ဂိုလ် (၁၀) ဦး

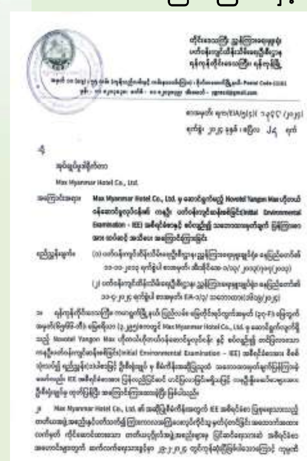
E Guard မှ ဆောင်ရွက်ခွင့်ရှိသော လုပ်ငန်းအမျိုးအစားများ

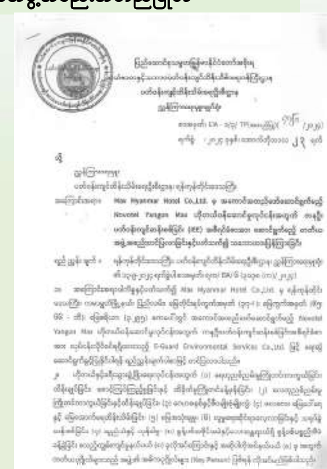
သယံဇာတနှင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန၏ လုပ်ငန်းလိုင်စင်ဆိုင်ရာ လုပ်ထုံးလုပ်နည်းအရ E Guard မှ

လေ့လာဆောင်ရွက်ခွင့်ရရှိသည့် စီမံကိန်းလုပ်ငန်းအမျိုးအစား (၁၅၅) ခုအနက်

စဉ်	စီမံကိန်းလုပ်ငန်းအုပ်စု	ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း နောက် ဆက်တွဲ (က) ပါ စီမံကိန်း လုပ်ငန်းအမျိုးအစား အမှတ်စဉ်
၃၃	သုသာန်၊ သင်္ချိုင်း တည်ဆောက်ခြင်းလုပ်ငန်း	(၁၂၀)
၃၄	ဟိုတယ်နှင့် ခရီးသွားအပန်းဖြေရေးလုပ်ငန်း	(၁၂၁)
၃၅	ဂေါက်ကွင်းတည်ဆောက်ခြင်းလုပ်ငန်း	(၁၂၂)
၃၆	လူနေအိမ်ရာဖွံ့ဖြိုးရေး၊ ပြန်လည်နေရာချထားရေးဆိုင်ရာ မြို့ပြဖွံ့ဖြိုးရေးနှင့် မြို့သစ်တည်ဆောက်ရေး စီမံကိန်း လုပ်ငန်း	(၁၄၂)
၃၇	အိပ်ဆောင်များ ကွန်ဒိုမီနီယံအဆောက်အဦ တည်ဆောက်ခြင်းလုပ်ငန်း	(၁၄၃)
၃၈	ဘက်စုံအားကစားကွင်း တည်ဆောက်ခြင်းလုပ်ငန်း	(၁၄၄)
၃၉	အထူးစီးပွားရေးဇုန်တည်ဆောက်ရေးနှင့် ဖွံ့ဖြိုးရေးစီမံကိန်းလုပ်ငန်း	(၁၄၅)
၄၀	ကုန်တိုက်ကြီးများ ကုန်သွယ်ရေးဌာန၊ အဆင့်မြင့်ဈေးများ တည်ဆောက်ခြင်း လုပ်ငန်း	(၁၄၆)
၄၁	မြေအောက်ထပ် တည်ဆောက်ခြင်းလုပ်ငန်း	(၁၄၇)
၄၂	အခြေခံအဆောက်အအုံလုပ်ငန်း	(၁၄၈)
၄၃	စားသောက်ဆိုင်လုပ်ငန်း	(၁၅၀)
	(၇) ပို့ဆောင်ရေးဆိုင်ရာ လုပ်ငန်း	
၄၄	ဆီရထားနှင့် လျှပ်စစ်ရထား ပို့ဆောင်ရေးလုပ်ငန်း	(၁၂၃)
၄၅	ကြိုးတပ်ကား တပ်ဆင်ပြေးဆွဲခြင်းလုပ်ငန်း	(၁၂၄)

Novotel Yangon Max ဟိုတယ်ဝန်ဆောင်မှုလုပ်ငန်းအတွက် ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း (IEE) အစီရင်ခံစာရေးသားဆောင်ရွက်ရန် အကြောင်းကြားစာနှင့် တတိယအဖွဲ့အစည်းအတည်ပြုစာ





အများပြည်သူနှင့် တိုင်ပင်ဆွေးနွေးခြင်း နှင့် အများပြည်သူ ပူးပေါင်းပါဝင်ခြင်းဆိုင်ရာ ဆွေးနွေးပွဲကျင်းပရခြင်း၏ ရည်ရွယ်ချက်

ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ထုံးလုပ်နည်း (၂၀၁၅) ၊ အပိုဒ် ၃၄ အရ

- စီမံကိန်းဆိုင်ရာ အချက်အလက်များ၊ စီမံကိန်းကြောင့် လူမှုပတ်ဝန်းကျင်အပေါ် ထိခိုက်သက်ရောက်နိုင်မှု အခြေအနေများ၊ သက်ရောက်မှုများအား လျော့ချနိုင်မည့်နည်းလမ်းများနှင့် ဆောင်ရွက်မည့် လုပ်ငန်းစဉ်၊ အချိန်ဇယား စသည်တို့အား အများပြည်သူထံ အသိပေးခြင်း၊
- အများပြည်သူနှင့်တိုင်ပင်ဆွေးနွေးခြင်းနှင့် အများပြည်သူပူးပေါင်းပါဝင်ခြင်းဆိုင်ရာ ဆွေးနွေးပွဲမရရှိသော အကြံဉာဏ်များနှင့် ဆွေးနွေးမှုရလဒ်များအား သိရှိနားလည်မှတ်သား၍ သက်ရောက်မှုများအား လျော့ချနိုင်မည့် နည်းလမ်းများ၊ စောင့်ကြပ်ကြည့်ရှုမည့် အစီအစဉ်များတွင် ထည့်သွင်းစဉ်းစားပေးခြင်း၊
- စီမံကိန်း၏ ပွင့်လင်းမြင်သာမှုနှင့် တာဝန်ယူနိုင်မှု တိုးတက်စေခြင်း၊

စီမံကိန်းတည်နေရာပြမြေပုံ

စီမံကိန်းအမည်	Novotel Yangon Max Hotel Project
စီမံကိန်းတည်နေရာ	အမှတ် (၄၅၉)၊ (၈) ရပ်ကွက်၊ ကမာရွတ်မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။
စီမံကိန်းအကျယ်အဝန်း	၇၂၀၀ စတုရန်းမီတာ
တည်နေရာ	မြောက်လတ္တီတွဒ် - ၁၆ ဒီဂရီ ၇ မိနစ် ၅၄.၆၈ စက္ကန့် အရှေ့လောင်ဂျီကျွ- ၁၆ ဒီဂရီ ၄၉ မိနစ် ၁၂.၂၅ စက္ကန့်

သဘာဝပတ်ဝန်းကျင်အပေါ်ထိခိုက်မှုများ လေ့လာဆန်းစစ်ခြင်း

ပတ်ဝန်းကျင်အပေါ် သက်ရောက်မှု

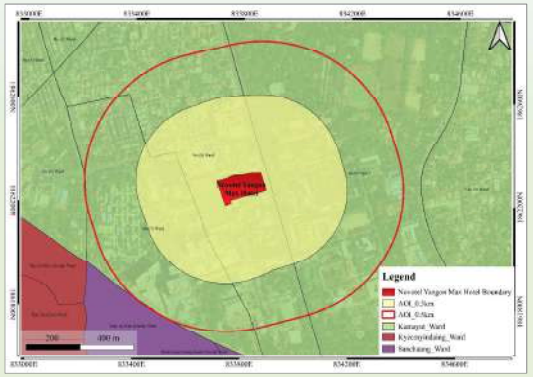
- လေအရည်အသွေး
- ရေအရည်အသွေးနှင့် ရေသုံးစွဲမှု
- ဆူညံသံနှင့်တုန်ခါမှု
- ဒီဇယ်မီးစုံမီးကွဲများ

လူသားများအပေါ် သက်ရောက်မှု

- ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး
- လူမှုစီးပွားရေး အခြေအနေများ

- စီမံကိန်းတည်နေရာအနီး လေ့လာဆန်းစစ်မှု နယ်ပယ်သတ်မှတ်ခြင်း၊ ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေးတိုင်းတာခြင်း၊ ကွင်းဆင်းလေ့လားခြင်းနှင့် လူမှုစီးပွားအခြေအနေများအပေါ် သက်ရောက်နိုင်မှုများအား စီမံကိန်းအဆိုပြုစာတမ်းများ၊ အစီရင်ခံစာ၊ သုတေသနစာတမ်းများအား မှီငြမ်းခြင်း။
- စီမံကိန်းကြောင့် ထိခိုက်မှုဖြစ်နိုင်သည့် အရာများကို ရှာဖွေရှာဖြေခြင်း။
- စီမံကိန်းအကောင်အထည်ဖော်မှုကြောင့် ဖြစ်ပေါ်လာနိုင်သည့် သက်ရောက်မှုများကို ဖော်ထုတ်ခြင်း။
- သက်ရောက်မှုများကို လျော့ချပေးနိုင်မည့် အစီအစဉ်များကို အကြံပြုတင်ပြခြင်း။
- စောင့်ကြပ်ကြည့်ရှုမှု အစီအစဉ်များ ကြိုတင်ပြင်ဆင်ပြီး အကောင်အထည်ဖော် ဆောင်ရွက်ခြင်း။

သဘာဝပတ်ဝန်းကျင်အပေါ်ထိခိုက်မှုများ လေ့လာဆန်းစစ်ခြင်း



<u>လက်တွေ့ကွင်းဆင်းလေ့လာခြင်း</u>

- **၀.၃ ကီလိုမီတာ** အတွင်းရှိ သဘာဝပတ်ဝန်းကျင်အရည်သွေး (လေထုအရည်အသွေး၊ ဆူညံသံ၊ တုန်ခါမှု၊ အနံ့) များအား ၂၄ နာရီ တိုင်းတာခြင်း။
- စီမံကိန်းလည်ပတ်ကာလတွင် အသုံးပြုမည့် ရေအရည်သွေးနှင့် စီမံကိန်းလည်ပတ်ခြင်းမှ ထွက်ရှိသည့် စွန့်ပစ်ရေဆိုးများကို ဆန်းစစ်ခြင်း။

<u>အစီရင်ခံစာ၊ သုတေသနစာတမ်းများအား မှီငြမ်းခြင်း</u>

- ကမာရွတ်မြို့နယ် ဒေသဆိုင်ရာ အစီရင်ခံစာ (၂၀၂၃) အား အခြေခံပြီး လူမှုစီးပွား အခြေအနေများ (ကျန်းမာရေး၊ ပညာရေး၊ စီးပွားရေး၊ လမ်းပန်းဆက်သွယ်ရေး၊ လူမှုရေး စသဖြင့်) လေ့လာခြင်း။
- **၀.၅ ကီလိုမီတာ** အတွင်းရှိ ယဉ်ကျေးမှုအမွေအနှစ်များအား သုသေတနစာတမ်းများအားမှီငြမ်းလေ့လာ ဆန်းစစ်ခြင်း။

Novotel Yangon Max ဟိုတယ်ဝန်ဆောင်မှုလုပ်ငန်းစီမံကိန်း ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး တိုင်းတာခြင်း နှင့် ရလဒ်များ

E Guard Environmental Services

လေ၊ ဆူညံသံ၊ အနံ့နှင့် တုန်ခါမှုအရေအသွေး တိုင်းတာသော နေရာများ

ပတ်ဝန်းကျင်ဆိုင်ရာတိုင်းတာမှုများ

- လေအရည်အသွေး
- ဆူညံသံနှင့် တုန်ခါမှုအဆင့်
- အနံ့
- စွန့်ထုတ်ရေအရည်အသွေး
- မြေအောက်ရေအရည်အသွေး

ပတ်ဝန်းကျင်ဆိုင်ရာ လေထုအရည်အသွေး၊ ရေအရည်အသွေး၊ အနံ့၊ ဆူညံသံနှင့်တုန်ခါမှုအဆင့်များ တိုင်းတာနေပုံ

လေအရည်အသွေး၊ ဆူညံသံနှင့် တုန်ခါမှုအဆင့် တိုင်းတာနေပုံ

မြေအောက်ရေ နမူနာကောက်ယူနေပုံ

မြေအောက်ရေ အရည်အသွေးတိုင်းတာနေပုံ

Haz-Scanner EPAS

Digital Sound Level Meter, Noise (dB (A))

Vibration Level Meter

Sampling Bottles

Horiba U-50

ပတ်ဝန်းကျင်ဆိုင်ရာအရည်အသွေးတိုင်းတာမှုများကို ၂၀၂၄ ခုနှစ်၊ အောက်တိုဘာလ၊ (၂) ရက်နေ့ နှင့် (၃) ရက်နေ့တို့တွင် ကွင်းဆင်းတိုင်းတာခဲ့ပါသည်။

ပတ်ဝန်းကျင်ဆိုင်ရာ လေထုအရည်အသွေး၊ ရေအရည်အသွေး၊ အနံ့၊ ဆူညံသံနှင့်တုန်ခါမှုအဆင့်များ တိုင်းတာနေပုံ

စီမံကိန်းမှ စွန့်ထုတ်ရေနမူနာကောက်ယူနေပုံ

စီမံကိန်းအတွင်း အနံတိုင်းတာခြင်း

Sampling Bottles

လေအရည်အသွေးတိုင်းတာမှုရလဒ်များ

တည်နေရာ	တိုင်းတာသည့် အမျိုးအစား	တိုင်းတာသည့် ရလဒ်	လမ်းညွှန်ချက် တန်ဖိုး	လမ်းညွှန်ချက်	တိုင်းတာသည့် ယူနစ်	ပျမ်းမျှ ကာလ
စီမံကိန်း တည်နေရာ အတွင်း (၂.၁၀.၂၀၂၄ - ၃.၁၀.၂၀၂၄)	PM_{10}	၁၇.၂၉	၅၀	NEQEG	µg/m³	24hrs
	$PM_{2.5}$	၈.၅၄	၂၅	NEQEG	µg/m³	24hrs
	NO_2	၃၄.၆၁	၂၀၀	NEQEG	µg/m³	1hr
	SO_2	၀.၅၇	၂၀	NEQEG	µg/m³	24hrs
	CO	၀.၀၀၀၂	၄	WHO	mg/m³	24hrs
	CO_2	၈၁၂.၇၅	၅၀၀၀	ACGIH	ppm	8hrs

လေအရည်အသွေးတိုင်းတာမှုရလဒ်တန်ဖိုးများသည် လမ်းညွှန်ချက်တန်ဖိုးအတွင်း ရှိပါသည်။

ဆူညံသံအဆင့် တိုင်းတာမှုရလဒ်များ

တည်နေရာ	ယူနစ်	တိုင်းတာရရှိသည့် ရလဒ်	
		နေ့အချိန်	ညအချိန်
အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (Industrial, Commercial)	dB(A)	၇၀	၇၀
စီမံကိန်းတည်နေရာအတွင်း	dB(A)	၇၄.၄၆	၇၃.၁၃

ဆူညံသံအဆင့်တိုင်းတာမှုရလဒ်တန်ဖိုးများသည် လမ်းညွှန်ချက်တန်ဖိုးထက် အနည်းငယ်ကျော်လွန်နေပါသည်။

တုန်ခါမှုအဆင့် တိုင်းတာမှုရလဒ်များ

	X-Lveq		Y-Lveq		Z-Lveq	
	နေ့အချိန် (၇:၀၀ မှ ၂၂:၀၀)	ညအချိန် (၂၂:၀၀ မှ ၇:၀၀)	နေ့အချိန် (၇:၀၀ မှ ၂၂:၀၀)	ညအချိန် (၂၂:၀၀ မှ ၇:၀၀)	နေ့အချိန် (၇:၀၀ မှ ၂၂:၀၀)	ညအချိန် (၂၂:၀၀ မှ ၇:၀၀)
Standard Guideline MOE Japan (dB)	၇၀	၆၅	၇၀	၆၅	၇၀	၆၅
စီမံကိန်းတည်နေရာ အတွင်းတိုင်းတာမှု ရလဒ်	၄၉.၁၇	၄၁.၅၆	၃၄.၁၀	၃၃.၁၉	၄၂.၀၉	၃၉.၅၉

တုန်ခါမှုအဆင့်တိုင်းတာမှုရလဒ်တန်ဖိုးများသည် လမ်းညွှန်ချက်တန်ဖိုးအတွင်း ရှိပါသည်။

မြေအောက်ရေအရည်အသွေး မြေပြင်တိုင်းတာမှုရလဒ်များ

ရေအရည်အသွေးဆိုင်ရာ အချက်အလက်များ	ယူနစ်	ရလဒ်တန်ဖိုး	WHO Drinking Water standard 2018.
pH	-	၆.၄၁	၆.၅-၈.၅
EC	(ms/cm)	၀.၁၅၄	၂၅၀၀
TDS	(g/l)	၀.၁	၁
Salinity	(ppt)	၀.၁	NA
DO	(mg/l)	၉.၇၄	၆
Turbidity	(NTU)	၀.၀	၅

မြေအောက်ရေအရည်အသွေး မြေပြင်တိုင်းတာမှုရလဒ်တန်ဖိုးများသည် လမ်းညွှန်ချက်တန်ဖိုးအတွင်း ရှိပါသည်။

မြေအောက်ရေအရည်အသွေး နမူနာကောက်ယူတိုင်းတာမှုရလဒ်များ

ရေအရည်အသွေးဆိုင်ရာ အချက်အလက်များ	ယူနစ်	ရလဒ် တန်ဖိုး	အမျိုးသားသောက်သုံးရေအရည်အသွေးစံချိန်စံညွှန်း	WHO Drinking Water standard 2018.
Carbonate	mg/l	ND	-	NA
Bicarbonate	mg/l	၈၅.၄၀	-	NA
Sulphate	mg/l	၆.၆၀	၂၅၀	-
Chloride	mg/l	၂၄.၃၆	၂၅၀	၂၅၀
Color	TCU	ND	၁၅	၁၅
Total Alkalinity	mg/l	၀.၆၃၂	-	-
Calcium Hardness	mg/l	၁၀.၀၀	၂၀၀	NA
Iron	mg/l	၀.၄၈	၁	၀.၃
Magnesium Hardness	mg/l	၅၄.၀၀	-	NA
Phosphate	mg/l	၀.၀၃	-	NA
Sodium Chloride	mg/l	၄၇.၇၉	-	NA
Suspended Solids	mg/l	၃	-	NA
Total Hardness	mg/l	၆၄.၀၀	-	၅၀၀
Total Solids	mg/l	၁၀၆	-	NA

မြေအောက်ရေအရည်အသွေးတိုင်းတာမှုရလဒ်တန်ဖိုးများသည် လမ်းညွှန်ချက်တန်ဖိုးအတွင်း ရှိပါသည်။

စွန့်ထုတ်ရေအရည်အသွေး တိုင်းတာမှုရလဒ်များ

ရေအရည်အသွေးဆိုင်ရာ အချက်အလက်များ	ယူနစ်	ရလဒ်တန်ဖိုး	အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ
Biological Oxygen Demand (BOD)	mg/l	1.61	50
Chemical Oxygen Demand (COD)	mg/l	36	250
pH	S.U.a	6.56	6-9
Total Nitrogen		1.12	10
Total Phosphorous	mg/l	0.16738	2
Total Suspended Solids	mg/l	55	50
Oil and Grease	mg/l	38	10
Total Coliform	MPN/100ml	<0.3	400
Temperature	mg/l	27.43	<3[b]

စွန့်ထုတ်ရေအရည်အသွေး မြေပြင်တိုင်းတာမှုရလဒ်တန်ဖိုးများသည် လမ်းညွှန်ချက်တန်ဖိုးအတွင်း ရှိပြီး အချို့မှာ အနည်းငယ်ကျော်လွန်နေပါသည်။

ပတ်ဝန်းကျင်ဆိုင်ရာ သက်ရောက်မှုအဆင့်သတ်မှတ်ချက်များ

ဆန်းစစ်ခြင်း	သတ်မှတ်ချက်				
	၁	၂	၃	၄	၅
ပြင်းအား	မသိသာ	သိသာမှုအနည်းငယ်ရှိပြီး လုပ်ငန်းခွင်တွင် သက်ရောက်မှု မရှိ။	သိသာမှု အလည်အလတ်ရှိပြီး လုပ်ငန်းခွင်တွင် သက်ရောက်မှု အနည်းငယ်ရှိ။	သိသာမှုများပြီး လုပ်ငန်းခွင်တွင် သက်ရောက်မှု ထင်ရှား။	သိသာမှုအလွန်များပြီး လုပ်ငန်းခွင်တွင် ပြောင်းလဲမှုထင်ရှား
ကြာချိန်	၀-၁ နှစ်	၂-၅ နှစ်	၆-၁၅ နှစ်	လုပ်ငန်းလည်ပတ်ချိန်တလျှောက်။	လုပ်ငန်းဖျက်သိမ်းသည်အထိ။
ပျံ့နှံ့နိုင်မှု	လုပ်ငန်းခွင်အတွင်းသာ	အနီးအနား ပတ်ဝန်းကျင်ထိ	ဒေသတွင်း	နိုင်ငံတွင်း	နိုင်ငံတကာထိ
ဖြစ်နိုင်စွမ်း	လုံး၀မဖြစ်နိုင်	မဖြစ်နိုင်	ဖြစ်နိုင်သည်	အလွန်ဖြစ်နိုင်သည်	ဖြစ်နိုင်မှုသေချာသည်။

ပတ်ဝန်းကျင်ဆိုင်ရာ သက်ရောက်မှုအဆင့်သတ်မှတ်ချက်များ

ထင်ရှားမှု= (ပြင်းအား+ ကြာချိန်+ ပျံ့နှံ့နိုင်မှု) * ဖြစ်နိုင်စွမ်း

ထင်ရှားမှု	ထိခိုက်မှုများ၏ထင်ရှားမှု
< ၁၅	အလွန်နည်း
၁၅-၂၉	နည်း
၃၀-၄၄	အလယ်အလတ်
၄၅-၅၉	မြင့်
> ၆၀	အလွန်မြင့်

ပတ်ဝန်းကျင်ဆိုင်ရာသက်ရောက်မှုများနှင့် လျော့ချရေးအစီအစဉ်

လုပ်ငန်းလည်ပတ်သည့် ကာလ

- ဟိုတယ်လုပ်ငန်းလည်ပတ်ခြင်း၊ အခန်းတွင်းသန့်ရှင်းရေးဆောင်ရွက်ခြင်းများ၊ စားသောက်ဆိုင်များ၊ အမှိုက်စွန့်ပစ်ခြင်း၊ ရေဆိုးထုတ်လွှတ်ခြင်း၊ အရင်းအမြစ်အသုံးချခြင်း အစရှိသည်-

လုပ်ငန်း ပိတ်သိမ်းကာလ

- ဟိုတယ်ဖြိုဖျက်ခြင်း၊ ပစ္စည်းများဖြုတ်သိမ်းခြင်း၊ ဖျက်သိမ်းခြင်းတို့ကြောင့် ဖြစ်ပေါ်လာနိုင်သော ဆိုးကျိုးသက်ရောက်မှုများ။

ဆိုးကျိုးသက်ရောက်ခြင်းမှ
- ✓ ကာကွယ်ရန်
- ✓ ရှောင်လွှဲရန်
- ✓ လျော့နည်းစေရန်

နည်းလမ်းများနှင့် အစီအစဉ်များ ဖော်ပြသည့်စိမံချက်

ပတ်ဝန်းကျင်ဆိုင်ရာ သက်ရောက်မှုအဆင့်သတ်မှတ်ချက်များ

သက်ရောက်မှုအဆင့်	သက်ရောက်မှု ဖော်ပြချက်	လုပ်ငန်းလည်ပတ်သည့်ကာလ	လုပ်ငန်းပိတ်သိမ်းသည့်ကာလ
အလွန်နုည်း (very low)	လုံးဝသက်ရောက်မှုမရှိသော အနေအထား	(၁) မြေဆီလွှာညစ်ညမ်းမှု	(၁) လူမှုစီးပွားဆိုင်ရာကောင်းကျိုး/ဆိုးကျိုး သက်ရောက်မှု
နုည်း (low)	သက်ရောက်မှုနုည်းပါး	(၁) လေထုအရည်အသွေး၊ (၂) ဆူညံသံ၊ တုန်ခါမှု၊ (၃) ရပ်ရွာကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး၊ (၄) ယဉ်ကျေးမှုဆိုင်ရာ အမွေအနှစ်	(၁) မြေဆီလွှာညစ်ညမ်းမှု၊ (၂) လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး၊ (၃) ယဉ်ကျေးမှုဆိုင်ရာ အမွေအနှစ်နှင့် (၄) မီးဘေးအန္တရာယ်သက်ရောက်မှု
အလယ်အလတ် (moderate)	သက်ရောက်မှုအနုည်းငယ်ရှိ၍ လျော့ပါးသက်သာစေရေး ဆောင်ရွက်ရန်လိုအပ်	(၁) ရေအရည်အသွေး၊ (၂) အမှိုက်စွန့်ပစ်မှု၊ (၃)လုပ်ငန်းခွင်ကျန်းမာရေးနှင့်ဘေးအန္တရာယ်ကင်းရှင်းရေး၊ (၄) မီးဘေးအန္တရာယ်သက်ရောက်မှု၊ (၅) မြေအောက်ရေသုံးစွဲမှု၊ (၆) စွမ်းအင်အသုံးချခြင်း	(၁) လေထုအရည်အသွေး၊ (၂) ရေအရည်အသွေး၊ (၃)ဆူညံသံ၊ တုန်ခါမှု၊ (၄) အမှိုက်စွန့်ပစ်မှု၊
များ (high)	ထင်ရှားသောသက်ရောက်မှုရှိ၍ လျော့ပါးသက်သာစေရေး အမှန်တကယ် ဆောင်ရွက်ရန်လိုအပ်	-	-
အလွန်များ (very high)	ရေရှည်ဆောင်ရွက်ရန် မသင့်တော်သော အနေအထား	-	-

စီမံကိန်းလည်ပတ်ရေးကာလအတွင်း ထိခိုက်သက်ရောက်မှုများနှင့် လျော့ချရေးအစီအစဉ်များ

E Guard Environmental Services

ဆိုးကျိုးများလျော့ပါးသက်သာစေရေးအစီအစဉ်များ

စဉ်	သက်ရောက်မှု	စီမံကိန်းလည်ပတ်ကာလအတွင်း လုပ်ငန်းဆောင်တာများ	လျော့ပါးသက်သာစေရေး ဆောင်ရွက်ချက်
၁။	လေထုညစ်ညမ်းမှု	• မီးပျက်ချိန် မီးစက်အသုံးပြုခြင်းများ • ခရီးသည်ယာဉ်သွားလာခြင်း • မီးဖိုချောင် ချက်ပြုတ်ခြင်း • အဲယားကွန်းအသုံးပြုခြင်း • ဟိုတယ်လုပ်ငန်းဝန်ဆောင်မှု၊ သန့်ရှင်းရေးလုပ်ငန်းနှင့် • အနီးနားရှိဆောက်လုပ်ရေးလုပ်ငန်းများ	• ဟိုတယ်ဝင်ပေါက်အနီးတွင် ယာဉ်ကြောပိတ်ဆို့မှုနှင့် ယာဉ်များမှ ဓာတ်ငွေ့ ထုတ်လွှတ်မှုကို လျော့ချရန် ယာဉ်အသွားအလာစီမံခန့်ခွဲမှု အလေ့အကျင့်များကို အကောင်အထည်ဖော်ခြင်း။ • မီးစက်များ၊ လေဝင်လေထွက်စနစ်များ၊ လေအေးပေးစက်များနှင့် မီးဖိုချောင်သုံး ပစ္စည်းများကို ပုံမှန်ထိန်းသိမ်းမှုပြုလုပ်ခြင်း • စွမ်းအင်နည်းပြီး ညစ်ညမ်းမှုနည်းသော ထုတ်လွှတ်သည့် စနစ်များကို တပ်ဆင်ခြင်းနှင့် ဘေးပတ်ဝန်းကျင်မှ ဖုန်နှင့်အခြားဓာတ်ငွေ့များ မဝင်ရောက်စေရန် အတားအဆီး အကာများတပ်ဆင်ထားရှိခြင်း။ • အဆိပ်သင့်မှုမရှိသော သန့်ရှင်းရေးပစ္စည်းထုတ်ကုန်များ၊ ဓာတ်ငွေ့ထုတ်လွှတ်မှု နည်းသော သုတ်ဆေးများအသုံးပြုခြင်း။
၂။	ဆူညံသံနှင့်တုန်ခါမှု	• မီးပျက်ချိန် မီးစက်အသုံးပြုခြင်းများ • ခရီးသည်ယာဉ်သွားလာခြင်း နှင့် ပြည်လမ်းမရှိ ကားသွားလာခြင်း • ဟိုတယ်လုပ်ငန်း စက်ပစ္စည်းအသုံးပြုခြင်း *****(ဟိုတယ်လုပ်ငန်းသည် အသံကာကွယ် စနစ်များအသုံးပြုထားခြင်းကြောင့် သိသာသည့် တုန်ခါမှုမရှိပါ။)*****	• ဆူညံသံလျော့ချရာတွင် ကုညီရန်အတွက် ကားသွားလာရာနှင့် ရပ်နားရာ နေရာများတွင် အပင်များ သို့မဟုတ် ဆူညံသံလျော့ချသည့် အတားအဆီးများကို တပ်ဆင်ခြင်း၊ • ဆူညံမှုလျော့ချရန်နှင့် ဆူညံမှုကြိမ်နှုန်းနည်းစေရန် ဧတော်မီစနစ်များ အသုံးပြုခြင်း။ • ညအချိန်တွင် အနီးနားနေထိုင်သူများကို စိတ်အနှောက်အယှက် မဖြစ်စေရန် အသံလုံသည့် မီးစက်များကို အသုံးပြုစေခြင်း။ • ညနေပိုင်းနှင့် ညပိုင်းအချိန်များတွင် အနှောင့်အယှက်မဖြစ်စေရန် ဆူညံသံအဆင့် ကန့်သတ်ချက်နှင့် အချိန်ကန့်သတ်မှုများထားရှိခြင်း၊

ဆိုးကျိုးများလျော့ပါးသက်သာစေရေးအစီအစဉ်များ

စဉ်	သက်ရောက်မှု	စီမံကိန်းလည်ပတ်ကာလအတွင်း လုပ်ငန်းဆောင်တာများ	လျော့ပါးသက်သာစေရေး နည်းလမ်းများ
၃။	အမှိုက်စွန့်ပစ်မှု	• အစိုင်အခဲစွန့်ပစ်မှု • ရေဆိုးစွန့်ပစ်မှု • အန္တရာယ်ရှိသော/ မရှိသော စွန့်ပစ်ပစ္စည်း စွန့်ပစ်မှု • မီးဖိုချောင်မှထွက်ရှိသောအမှိုက်အစို၊ အခြောက် • ဟိုတယ်သန့်ရှင်းရေးလုပ်ငန်းမှ ထွက်ရှိသော အညစ်အကြေး	• အစားအသောက်စွန့်ပစ်ပစ္စည်းများ။ ပြန်လည်အသုံးပြုနိုင်သော၊ အန္တရာယ်ရှိသော/မရှိသော စွန့်ပစ်ပစ္စည်းများကို ခွဲခြားရန် စွန့်ပစ်ပစ္စည်း ခွဲခြားခြင်းစနစ်ကို အကောင်အထည်ဖော်ဆောင်ရွက်ခြင်း။ • အမှိုက်စုပုံစွန့်ပစ်ရမည့်နေရာသည် အဆင်ပြေသောနေရာတွင်သာ ထားရှိသင့်ခြင်းနှင့် အမှိုက်ခွဲခြားစွန့်ပစ်နိုင်ရန် ပုံးများတွင် စတစ်ကာများ ရှင်းလင်းစွာ ကပ်ထားခြင်း။ • အန္ဓဆိုးများနှင့် ပိုးမွှားများကို ကာကွယ်ရန် အဖုံးပါသော အမှိုက်ပုံးများအား အသုံးပြုစေခြင်း။ • ဒေသတွင်း ရေနုတ်မြောင်းစနစ်များထဲသို့ အမှိုက်နှင့် ရေဆိုးစွန့်ပစ်မှုများမရှိစေရန် ဆောင်ရွက်ခြင်း။ • ဆီယိုဖိတ်မှုများ သို့မဟုတ် ညစ်ညမ်းမှုများ မဖြစ်စေရန် ရေပိုက်နှင့် ရေဆိုးစနစ်များကို ပုံမှန်စစ်ဆေးခြင်းနှင့် ပြုပြင်ထိန်းသိမ်းခြင်းများပုံမှန် ဆောင်ရွက်စေခြင်း။ • ရေဆိုးစွန့်ပစ်ခြင်းအတွက် သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာ စည်းမျဉ်းများကို သေချာစွာ လိုက်နာစေခြင်း။ • ဝန်ထမ်းများကို အန္တရာယ်ရှိသော သန့်စင်ဆေးရေများနှင့် ဓာတုပစ္စည်းများကို ဂရုတစိုက် ကိုင်တွယ်အသုံးပြုရန် နှင့် သိုလှောင်ရန် လေ့ကျင့်ပေးခြင်း။

ဆိုးကျိုးများလျော့ပါးသက်သာစေရေးအစီအစဉ်များ

စဉ်	သက်ရောက်မှု	စီမံကိန်းလည်ပတ်ကာလအတွင်း လုပ်ငန်းဆောင်တာများ	လျော့ပါးသက်သာစေရေး နည်းလမ်းများ
၄။	မြေဆီလွှာညစ်ညမ်းမှု	• မီးစက်အသုံးပြုခြင်းနှင့် ထိန်းသိမ်းခြင်းမှ ဆီယိုဖိတ်မှု • အမှိုက်စွန့်ပစ်မှုစနစ် • မစိမ့်ဝင်နိုင်သော မျက်နှာပြင်အသုံးပြုခြင်း	• မီးစက်များနှင့် လောင်စာသိုလှောင်သည့် နေရာများအောက်တွင် ယိုစိမ့်မှု သို့မဟုတ် ယိုဖိတ်မှုမှန်သမျှကို ဖမ်းယူနိုင်ရန် စနစ်များ ထားရှိခြင်း။ • အမှိုက်အမျိုးအစားအားလုံးကို စီစစ်စွန့်ပစ်ခြင်း။ ပြန်လည်အသုံးပြုခြင်း စသည့် ပြီးပြည့်စုံသော စည်ဆက်မပြတ် အမှိုက်စီမံခန့်ခွဲမှုအစီအစဉ်များ ရေးဆွဲခြင်း။ • မြေဆီလွှာစိမ့်ဝင်နိုင်စွမ်းကို ဖြင့်တင်ရန်နှင့် ရေထွက်နှုန်းကို လျော့ချရန် အတွက် အပင်များစိုက်ပျိုးခြင်း။ ရှုခင်းဧရိယာများကို ဖန်တီးပြင်ဆင်ခြင်း၊ ဧရိယာအများစုကို မစိမ့်ဝင်နိုင်သော မျက်နှာပြင်များဖြင့် ဖုံးအုပ်ထားသော်လည်း မဟာဗျူဟာကျသော စိုက်ပျိုးခြင်းသည် မြေအောက်ရေအား ပြန်လည်အားဖြည့်ရန် ကူညီပေးနိုင်ခြင်း။ • မြေဆီလွှာညစ်ညမ်းခြင်းမှကာကွယ်ရန် စွန့်ပစ်ရေနုတ်မြောင်းစနစ်များကို စဉ်ဆက်မပြတ် ထိန်းသိမ်းပြုပြင်ခြင်း။

ဆိုးကျိုးများလျော့ပါးသက်သာစေရေးအစီအစဉ်များ

စဉ်	သက်ရောက်မှု	စီမံကိန်းလည်ပတ်ကာလအတွင်း လုပ်ငန်းဆောင်တာများ	လျော့ပါးသက်သာစေရေး နည်းလမ်းများ
၅။	အမှိုက်စွန့်ပစ်မှု		• သန့်ရှင်းရေးပစ္စည်းများကို သတ်မှတ်ထားသောနေရာတွင် ဂရုတစိုက်သိမ်းဆည်းထား သင့်ပြီး တံဆိပ်ကပ်၍ လုံခြုံသောနေရာတွင် သိမ်းဆည်းစေခြင်း။ • ဟိုတယ်လုပ်ငန်းဆောင်ရွက်မှုများတွင် Eco-friendly နှင့် ပြန်လည်အသုံးပြုနိုင်သော ထုတ်ကုန်ပစ္စည်းများကို အသုံးပြုစေခြင်း။ • စက္ကူ၊ ပလတ်စတစ်နှင့် အခြား ပြန်လည်အသုံးပြုနိုင်သော ပစ္စည်းများအတွက် ပြန်လည် အသုံးပြုခြင်းအစီအစဉ်များကို အကောင်အထည်ဖော် ဆောင်ရွက်ခြင်း။ • အသိပညာပေးအစီအစဉ်များနှင့် လမ်းညွှန်မှုအဖွဲ့အသားများမှတဆင့် အမှိုက်လျော့ချရေး အလေ့အကျင့်များတွင် ပါဝင်ရန် ဧည့်သည်များအား တိုက်တွန်းနှိုးဆော်ပေးခြင်း။
၆။	မြေအောက်ရေသုံးစွဲမှု	• ရေချိုးခန်း၊ မီးဖို၊ အိမ်သာနှင့် အခြားဟိုတယ်လုပ်ငန်းလည်ပတ်မှုများအတွက် ရေသုံးစွဲခြင်း။ • အခန်းတွင်း သန့်ရှင်းရေးလုပ်ငန်းများနှင့် အဝတ်လျှော်လုပ်ငန်းအတွက် ရေသုံးစွဲခြင်း။	• ရေသုံးစွဲမှုကို လျော့ချရန်အတွက် low-flow ပိုက်ခေါင်းများ၊ ရေချိုးရေပန်းများ နှင့် ရေဆွဲနှစ်မျိုးပါ အိမ်သာများကို တပ်ဆင်ထားရှိခြင်း။ • ရေအသုံးချမှုလျော့ချရန် Eco Friendly Signages များမှတဆင့် ဧည့်သည်များအားလုံးကို အသိပေးနှိုးဆော်ပေးခြင်း။ • ရေချွေတာအသုံးပြုနိုင်သော အဝတ်လျှော်စက်များနှင့် ရေကိုအနည်းဆုံးအသုံးပြုစေသော အဝတ်လျှော်စနစ်များကို အသုံးပြုခြင်း။ • ရေပိုက်များနှင့် စက်ကိရိယာများကို ပုံမှန်ထိန်းသိမ်းခြင်းနှင့် ပြုပြင်ထိန်းသိမ်းခြင်းများ ပြုလုပ်ခြင်း။

ဆိုးကျိုးများလျော့ပါးသက်သာစေရေးအစီအစဉ်များ

စဉ်	သက်ရောက်မှု	စီမံကိန်းလည်ပတ်ကာလအတွင်း လုပ်ငန်းဆောင်တာများ	လျော့ပါးသက်သာစေရေး နည်းလမ်းများ
၇။	စွမ်းအင်အသုံးချခြင်း	• လေအေးပေးစက်နှင့် ရေခဲသေတ္တာ အတွက် စွမ်းအင်အသုံးချခြင်း။ • အလင်းနှင့် လျှပ်စစ်သုံး ကိရိယာများ အတွက် လျှပ်စစ်စွမ်းအင် အသုံးပြုခြင်း။	• စွမ်းအင်ချွေတာသော မီးသီးများ၊ မီးချောင်းများနှင့် စွမ်းအင်သက်သာသော နည်းစနစ်များကို တပ်ဆင်အသုံးပြုခြင်း။ • ပြန်လည်ဖွံ့ဖြိုးမြဲစွမ်းအင်ထုတ်လုပ်အသုံးပြုနိုင်ရန် ဆိုလာပြားများ တပ်ဆင်အသုံးပြုခြင်း။ • နေ့ခင်းဘက်တွင် သဘာဝအလင်းရောင်ကို တတ်နိုင်သမျှ အသုံးပြုခြင်း။ • အခန်းများနှင့် အများသုံးနေရာများတွင် လျှပ်စစ်စွမ်းအင်အသုံးပြုသော ကိရိယာများအား အသုံးမပြုလျှင် သို့မဟုတ် လူမရှိလျှင် ပိတ်ထားရန် သတိပေးစာများ ကပ်ပေးထားခြင်း။ • စွမ်းအင်သုံးစွဲမှုအား ပုံမှန်စိစစ်ဆောင်ရွက်စေခြင်း။
၈။	ရပ်ရွာကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး	• ဟိုတယ်လုပ်ငန်းလည်ပတ်ရန် အတွက် ရေအသုံးချမှုများ။ • ဟိုတယ်လုပ်ငန်းလည်ပတ်ရန် အတွက် လျှပ်စစ်ဓာတ်အားသုံးစွဲမှု • ဘေးအန္တရာယ်ကြိုတင်ပြင်ဆင်မှုနှင့် တုံ့ပြန်ရေးအစီအစဉ်များ အားနည်းလျှင် ပတ်ဝန်းကျင်သို့ ဘေးအန္တရာယ် ဖြစ်ပေါ်စေ နိုင်ခြင်း။	• သင့်လျော်သော သန့်ရှင်းရေး အစီအမံများအပါအဝင် ဟိုတယ်လုပ်ငန်း ဆောင်ရွက်မှု အားလုံးတွင် သင့်လျော်သော တစ်ကိုယ်ရေသန့်ရှင်းမှုစနစ်များ၊ ပတ်ဝန်းကျင်ဆိုင်ရာစွန့်ပစ်မှု စံချိန်စံနှုန်းများနှင့်အညီဆောင်ရွက်စေခြင်း။ • ဝန်ထမ်းများအတွက် ပုံမှန်ကျန်းမာရေးစောင့်ရှောက်မှုကို အကောင်အထည်ဖော်ပြီး တစ်ကိုယ်ရည်သန့်ရှင်းမှုနှင့် ရောဂါကာကွယ်ရေးဆိုင်ရာ သင်တန်းများ ဆောင်ရွက်ပေးခြင်း။ • ရေအသုံးပြုမှုလျော့ချနိုင်ရန် ရေအားသက်သာသော စနစ်ကျသည့် ရေပိုက်၊ ရေခွဲအိမ်သာများ နှင့် အဝတ်လျှော်စက်များကဲ့သို့သော နည်းပညာများ တပ်ဆင်အသုံးပြုခြင်းနှင့် ရေအသုံးပြုမှုကို ပုံမှန်စစ်ဆေးပြီး စောင့်ကြည့်ခြင်း။

ဆိုးကျိုးများလျော့ပါးသက်သာစေရေးအစီအစဉ်များ

စဉ်	သက်ရောက်မှု	စီမံကိန်းလည်ပတ်ကာလအတွင်း လုပ်ငန်းဆောင်တာများ	လျော့ပါးသက်သာစေရေး နည်းလမ်းများ
	ရပ်ရွာကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး	• ယာဉ်ကြောပိတ်ဆို့မှုများ ဖြစ်စေနိုင်ခြင်း။ • လုပ်ငန်းသုံးစက်များ၊ ယာဉ်များ၊ သန့်ရှင်းရေးပစ္စည်းများ၊ မိလ္လာစနစ်၊ ရေသန့်စင်ထုတ်လွှတ်မှုစနစ်များ လျော့နည်းခြင်း ရှိခဲ့လျှင် ကျန်းမာရေး ထိခိုက်စေနိုင်ခြင်း။	• လျှပ်စစ်သုံးစွဲမှုကို လျော့ချရန် စွမ်းအင်သုံးသက်သာသော ကိရိယာများနှင့် စနစ်များကို တပ်ဆင်အသုံးပြုခြင်းနှင့် စွမ်းအင်အသုံးချမှု အလေအလွင့်နှင့် ရှောခ်မဖြစ်စေရန် ပုံမှန်ထိန်းသိမ်းခြင်းများ ပြုလုပ်ဆောင်ရွက်ခြင်း။ • အရေးပေါ်တုံ့ပြန်ရေးအစီအစဉ်များကို စနစ်တကျ အကောင်အထည်ဖော်ခြင်း။ • လုံလောက်သောမီးငြိမ်းသတ်ရေးကိရိယာများ၊ အရေးပေါ် အချက်ပေးစနစ်များ နှင့် အရေးပေါ်ထွက်ပေါက်လမ်းကြောင်းများကို ရှင်းလင်းစွာ အမှတ်အသား ပြုလုပ်ထားခြင်း။ • ဝန်ထမ်းများနှင့် ဧည့်သည်များအတွက် ပုံမှန်လေ့ကျင့်ရေးများပြုလုပ်ပြီး ဆောင်ရွက်ခြင်း။ • ဟိုတယ်ပစ္စည်းများ သယ်ယူခြင်းနှင့်အမှိုက်သိမ်းဆည်းခြင်းတွင် လမ်းပိတ်ဆို့မှုများ မရှိစေရန် စီမံသတ်မှတ်ထားခြင်း။ • ဟိုတယ်ဧည့်သည်များဝင်/ထွက်ရာတွင် ယာဉ်လမ်းကြောင်းပိတ်ဆို့မှု မဖြစ်စေရန် အခြားနည်းလမ်းများကို သတ်မှတ်ထားရှိခြင်း။

ဆိုးကျိုးများလျော့ပါးသက်သာစေရေးအစီအစဉ်များ

စဉ်	သက်ရောက်မှု	စီမံကိန်းလည်ပတ်ကာလအတွင်း လုပ်ငန်းဆောင်တာများ	လျော့ပါးသက်သာစေရေး နည်းလမ်းများ
၉။	ယဉ်ကျေးမှုဆိုင်ရာ အမွေအနှစ်	• လျှပ်စစ်အသုံးပြုသည့်စနစ် ချို့ယွင်းမှုကြောင့် မီးလောင်မှုဖြစ်ခြင်း။ • လောင်ကျွမ်းပစ္စည်းသို့လှောင်ရာတွင် ပေါ့ဆမှု ဖြစ်ခြင်း။ • မီးဖိုချောင်၊ အပူအအေးစနစ်များမှ ပေါ့ဆမှု ဖြစ်ခြင်း။ • မီးပေါ့ဆမှုကြောင့် အနီးဝန်းကျင်ရှိ ယဉ်ကျေးမှု အမွေအနှစ်များအား ထိခိုက်ပျက်ဆီးနိုင်ခြင်း။	• ဟိုတယ်တစ်ခုလုံးတွင် မီးဘေးအန္တရာယ် ကြိုတင် ကာကွယ်ရေးစနစ်များ စနစ်တကျ တပ်ဆင်အသုံးပြုခြင်း။ • လျှပ်စစ်သုံးစွဲမှုစနစ်နှင့် စက်ပစ္စည်းများ ချို့ယွင်းမှုမရှိစေရန် ပုံမှန်စစ်ဆေးမှု များဆောင်ရွက်ခြင်း။
၁၀။	လုပ်ငန်းခွင်ကျန်းမာရေးနှင့်ဘေးအန္တရာယ်ကင်းရှင်းရေး	• စက်ပစ္စည်းများထိန်းသိမ်းကိုင်တွယ်ခြင်း • သန့်ရှင်းရေးလုပ်ငန်းဆောင်ရွက်ခြင်း • သန့်ရှင်းရေးနှင့် ရေကူးကန် သန့်စင်ခြင်းအတွက် ဓာတုပစ္စည်း အသုံးပြုခြင်း • အပူအအေးစက်များ၊ မီးစက်များမှ အဋ္ဌ, ထွက်ရှိမှုကြောင့် အသက်ရှူလမ်းကြောင်း ဆိုင်ရာ ပြဿနာများ ဖြစ်ပေါ်စေနိုင်ခြင်း	• အရေးပေါ်တုံ့ပြန်ရေးအစီအစဉ်များ ချမှတ်ပြီး မတော်တဆမှုများကို စီမံခန့်ခွဲနည်း အား ဝန်ထမ်းများအား လေ့ကျင့်သင်ကြားပေးခြင်း။ • စက်ကိရိယာပစ္စည်းများနှင့် လျှပ်စစ်သွယ်တန်းစနစ်များအား ပုံမှန် စစ်ဆေးစေခြင်း။ • အသက်ရှူလမ်းကြောင်းဆိုင်ရာ ရောဂါများကို လျော့ချနိုင်ရန် မီးဖိုချောင်၊ အဝတ်လျှော်ခန်းနှင့် သန့်ရှင်းရေးအခန်း နေရာများကို လေဝင်လေထွက် ကောင်းမွန်စေရန် ထားရှိခြင်း။

ဆိုးကျိုးများလျော့ပါးသက်သာစေရေးအစီအစဉ်များ

စဉ်	သက်ရောက်မှု	စီမံကိန်းလည်ပတ်ကာလအတွင်း လုပ်ငန်းဆောင်တာများ	လျော့ပါးသက်သာစေရေး နည်းလမ်းများ
	လုပ်ငန်းခွင်ကျန်းမာရေးနှင့်ဘေးအန္တရာယ်ကင်းရှင်းရေး		• ဓာတုပစ္စည်းများ လုံခြုံစွာကိုင်တွယ်ခြင်း၊ သိုလှောင်ခြင်းနှင့် စွန့်ပစ်ခြင်းဆိုင်ရာ အစီအစဉ်များကို ဝန်ထမ်းများအား ပုံမှန်လေ့ကျင့်ပေးခြင်း။ • လက်ဆေးသည့်နေရာများနှင့် လက်ဆေးရည်အပါအဝင် တစ်ကိုယ်ရေသုံး ကာကွယ်ရေးပစ္စည်း (PPE) များကို စီမံထားရှိခြင်း။ • ရှားပြီးသူနာပြုနည်းဖြင်းပြစုခြင်းနှင့် ပုံမှန်ကျန်းမာရေးစစ်ဆေးမှုများ အပါအဝင် ဝန်ထမ်းများ၏ ဆေးဘက်ဆိုင်ရာ ဝန်ဆောင်မှုများကို စီမံထားရှိခြင်း။ • ဝန်ထမ်းများနှင့် ဧည့်သည်များအတွက် ဘေးအန္တရာယ်နှင့် ကျန်းမာရေး အန္တရာယ်များကို လျော့ချရန်နှင့် ပြည့်စုံသော လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး စီမံခန့်ခွဲမှုအစီအစဉ်ကို အကောင်အထည်ဖော် ဆောင်ရွက်ခြင်း။
၁၁။	လူမှုစီးပွားအခွင့်အရေး	• ဒေသခံပြည်သူများအတွက် ယာယီ အလုပ်အကိုင်းအခွင့်အလမ်းများ ရရှိလာပြီး စီးပွားရေးကောင်းမွန်စေခြင်း။	• မလိုအပ်ပါ။

ဆိုးကျိုးများလျော့ပါးသက်သာစေရေးအစီအစဉ်များ

စဉ်	သက်ရောက်မှု	စီမံကိန်းလည်ပတ်ကာလအတွင်း လုပ်ငန်းဆောင်တာများ	လျော့ပါးသက်သာစေရေး နည်းလမ်းများ
၁၂။	မီးဘေးအန္တရာယ်နှင့် လျှပ်စစ်အန္တရာယ်	• လျှပ်စစ်အသုံးပြုသည့်စနစ် ချို့ယွင်းမှုကြောင့် မီးလောင်မှုဖြစ်ခြင်း • လောင်ကျွမ်းပစ္စည်းသိုလှောင်ရာတွင် ပေါ့ဆမှုဖြစ်ခြင်း • မီးဖိုချောင်၊ အပူအအေးစနစ်များမှ ပေါ့ဆမှုဖြစ်ခြင်း • ဒီဇယ်များသိုလှောင်ထားခြင်း • ဆေးလိပ်မသောက်ရနေရာတွင် ဆေးလိပ်သောက်သုံးမိခြင်း	• ဝါယာကြိုးများ၊ စက်ပစ္စည်းများအပါအဝင် လျှပ်စစ်စနစ်အားလုံးကို ပုံမှန်စစ်ဆေးခြင်းနှင့်ပြုပြင်ထိန်းသိမ်းခြင်း။ • အပူလွန်ကဲခြင်းနှင့် လုပ်ငန်းဆောင်တာများတွင် အမှားအယွင်းမဖြစ် စေရန် လေဝင်လေထွက်နှင့် လေအေးပေးစက်များကို ပုံမှန်ဝန်ဆောင်မှုပြုလုပ်ခြင်းနှင့် ပြုပြင်ထိန်းသိမ်းခြင်း။ • လေဝင်လေထွက်ကောင်းပြီး သတ်မှတ်ထားသည့် နေရာများတွင်သာ သန့်ရှင်းရေးသုံး ပစ္စည်းများနှင့် လောင်စာများအပါအဝင် မီးလောင်လွယ်သည့် ပစ္စည်းများကို သိမ်းဆည်းစေခြင်း။ • မတော်တဆမီးလောင်မှုမှ ကာကွယ်ရန် ဝန်ထမ်းမားအား သင့်လျော်သော ကိုင်တွယ်မှုများ၊ သိုလှောင်ခြင်းနှင့် စွန့်ပစ်ခြင်း ဆိုင်ရာအလေ့အကျင့်များကို ပုံမှန်လေ့ကျင့်သင်ကြားပေးခြင်း။ • အထူးသဖြင့် ဧည့်ခန်းနှင့် အများသုံးနေရာများတွင် ဆေးလိပ်မသောက်ရ အမှတ်အသားများ ရှင်းလင်းစွာ သတ်မှတ်ထားရှိစေခြင်း။ • မီးဘေးအန္တရာယ်တုံ့ပြန်နိုင်ရန် မီးသတ်ဆေးဘူးများနှင့် အချက်ပေးကိရိယာများ အပါအဝင် မီးဘေးအန္တရာယ်လျော့ချရေး အစီအစဉ်များကို ကြပ်မတ်ဆောင်ရွက် စေခြင်း နှင့် အရေးပေါ်အခြေအနေများကို တုံ့ပြန်နိုင်ရန် အရေးပေါ်ကြိုတင်ပြင်ဆင်မှုများကို ပုံမှန်ပြုလုပ်ခြင်း။

စီမံကိန်းပိတ်သိမ်းသည့်ကာလအတွင်း သက်ရောက်နိုင်မှုများ၊ ဆိုးကျိုးများလျော့နည်းစေမည့်အစီအမံများ။

E Guard Environmental Services

ဆိုးကျိုးများလျော့ပါးသက်သာစေရေးအစီအစဉ်များ

စဉ်	သက်ရောက်မှု	စီမံကိန်းပိတ်သိမ်းသည့်ကာလအတွင်း လုပ်ငန်းဆောင်တာများ	လျော့ပါးသက်သာစေရေး ဆောင်ရွက်ချက်
၁။	လေထုညစ်ညမ်းမှု	• အဆောက်အဦဖျက်သိမ်းသည့်လုပ်ငန်းမှ ဖုန်၊ အမှုန့်များ ထွက်ရှိခြင်း။ • စက်ပစ္စည်းများနှင့် ပစ္စည်းကိရိယာများမှ ဓာတ်ငွေ့ထုတ်လွှတ်မှုများရှိခြင်း။ • အန္တရာယ်ရှိသော စွန့်ပစ်ပစ္စည်းကြွင်းကျန်များ ကြောင့် လေထုညစ်ညမ်းစေခြင်း။	• ဖုန်မှုန့်နှင့် အမှုန်အမွှားများကို တားဆီးရန် ဖုန်မှုန့်အတားအဆီးများထားရှိကာကွယ်စေခြင်း။ • အငွေ့ထွက်ခြင်း လျော့ကျစေရန် စက်ကိရိယာများကို ပုံမှန်စစ်ဆေးခြင်းနှင့်ပြုပြင် ထိန်းသိမ်းမှုများ ပြုလုပ်ခြင်း။ • ယာဉ်ရွေ့လျားမှုများကို သတ်မှတ်နေရာများတွင်သာ ကန့်သတ်သွားလာစေခြင်း။ • အန္တရာယ်ရှိသော ပစ္စည်းများကို အလုံပိတ်ကွန်တိန်နာများဖြင့် သိမ်းဆည်းထားစေခြင်းနှင့် မတော်တဆ ဖိတ်စင်ခြင်းနှင့် ထွက်ကျခြင်းများမှ ဓာတ်ငွေ့နှင့်အမှုန်ထွက်ရှိမှုမှ ကာကွယ်ခြင်း။ • အန္တရာယ်ရှိသော ပစ္စည်းများကို မီးရှို့ဖျက်ဆီးခြင်းမှ ရှောင်ကြဉ်ခြင်း။ • ညစ်ညမ်းမှုနှင့် ဖုန်မှုန့်များထွက်ရှိခြင်းနှင့် ၎င်းအန္တရာယ်များကို သတိပြုမိစေရန် အလုပ်သမားများကို ပုံမှန်လေ့ကျင့်သင်ကြားပေးခြင်း။
၂။	ဆူညံသံနှင့် တုန်ခါမှု	• စက်ပစ္စည်းများဖြတ်တောက်ခြင်း၊ ထုရိုက်ခြင်း စသည့် လုပ်ငန်းစဉ်များနှင့် စက်ယန္တရားကြီးများ အသုံးပြုခြင်းကြောင့် ဆူညံသံနှင့် တုန်ခါမှု ဖြစ်ပေါ်နိုင်ခြင်း။ • စက်ယန္တရားကြီးများ လည်ပတ်ခြင်းမှ ဆူညံသံ များထွက်ရှိခြင်း။ • အဆောက်အဦဖြိုချခြင်း၊ ပစ္စည်းကိရိယာများ ဖယ်ရှားခြင်းမှ ဆူညံသံနှင့် တုန်ခါမှုများထွက်ရှိခြင်း။	• ဆူညံသံလျော့ချရန် ခေတ်မီယန္တရားများနှင့် ယာဉ်များအသုံးပြုခြင်း။ • ထိရောက်စွာ လည်ပတ်နိုင်စေရန် နှင့် ဆူညံသံလျော့ချရန် စက်ပစ္စည်းများကိုပုံမှန်ထိန်းသိမ်းခြင်း။ • ပတ်ဝန်းကျင်သို့ဆူညံမှုများ ပျံ့နှံ့မှု လျော့ချရန် ယာယီ ဆူညံသံ အတားအဆီးများနှင့် အကာအရံများထားရှိဆောင်ရွက်ခြင်း။ • အဆောက်အဦဖြိုဖျက်ခြင်းများ၏ အချိန်ဇယားနှင့်ပတ်သက်၍ လုပ်ငန်းဆောင်ရွက်ရန် ဒေသခံပြည်သူများအား ကြိုတင်အသိပေးခြင်းများ ဆောင်ရွက်ခြင်း။

ဆိုးကျိုးများလျော့ပါးသက်သာစေရေးအစီအစဉ်များ

စဉ်	သက်ရောက်မှု	စီမံကိန်းပိတ်သိမ်းသည့်ကာလအတွင်း လုပ်ငန်းဆောင်တာများ	လျော့ပါးသက်သာစေရေး ဆောင်ရွက်ချက်
၃။	ရေအရည်အသွေး	• အဆောက်အဦဖြိုဖျက်ခြင်းမှ ထွက်ရှိသော အဆောက်အဦပစ္စည်းများ၊ အိမ်သုတ်ဆေး၊ သန့်ရှင်းရေးပစ္စည်းနှင့် ကြွင်းကျန်အမှိုက်များ။ • ရေမြောင်းတွင်း ကြွင်းကျန်ပစ္စည်းများ ပိတ်ဆို့မှုကြောင့် ရေကြီးမှုဖြစ်နိုင်စေခြင်းနှင့် ရေညစ်ညမ်းမှုဖြစ်စေခြင်း	• ယိုစိမ့်ခြင်းနှင့် ယိုဖိတ်မှုများကို ကာကွယ်ရန် အန္တရာယ်ရှိသော ပစ္စည်းများနှင့် သန့်စင်ဆေးရည်များအားလုံးကို သတ်မှတ်ထားသော ကွန်တိန်နာတွင်း သိမ်းဆည်းစေခြင်း။ • ဒေသအလိုက်ရေလွှမ်းမိုးခြင်းမှ ကာကွယ်ရန် ရေနုတ်မြောင်းစနစ်များ ကို စနစ်တကျ ထိန်းသိမ်းဆောင်ရွက်စေခြင်း။ • ရေအသုံးပြုခြင်းနှင့် စွန့်ပစ်ခြင်းအတွက် ပတ်ဝန်းကျင်ဆိုင်ရာ လမ်းညွှန်ချက်များနှင့်အညီ လိုက်နာဆောင်ရွက်စေခြင်း။
၄။	မြေဆီလွှာညစ်ညမ်းမှု	• အဆောက်အဦဖယ်ရှားခြင်း၊ မြေယာရှင်းလင်းခြင်းများအတွက် တူးဖော်ခြင်း။ • လုပ်ငန်းပိတ်သိမ်းသည့် လုပ်ဆောင်မှုများ အတွက် စက်ယန္တရားများ အသုံးပြုခြင်း။	• လုပ်ငန်းပိတ်သိမ်းခြင်း လုပ်ငန်းစဉ်တွင် အန္တရာယ်ရှိသော ပစ္စည်းများကို သင့်လျော်စွာခွဲခြား၍ စွန့်ပစ်စေခြင်း။ • မြေဆီလွှာထိခိုက်ပျက်စီးခြင်းမှကာကွယ်ရန် ထိခိုက်မှုလျော့နည်း စေမည့် ထိန်းချုပ်ရေးနည်းလမ်းများ ကို စနစ်တကျ ဆောင်ရွက်စေခြင်း။ • မြေဆီလွှာစိမ့်ဝင်မှုနှင့် ထိခိုက်ပျက်စီးမှုကို လျော့ချရန်နှင့် မြေသားပြန်လည်အားဖြည့်စေရန် အပင်များပြန်လည် စိုက်ပျိုးစေခြင်း။ • ဆီများ၊ လောင်စာများနှင့် အခြားအန္တရာယ်ရှိသော စွန့်ပစ်မှုများ ယိုစိမ့်ခြင်း သို့မဟုတ် ယိုဖိတ်ခြင်းမှ ကာကွယ်ရန် စက်ယန္တရားကြီးများကို ပုံမှန် စစ်ဆေးထိန်းသိမ်းခြင်း။

ဆိုးကျိုးများလျော့ပါးသက်သာစေရေးအစီအစဉ်များ

စဉ်	သက်ရောက်မှု	စီမံကိန်းပိတ်သိမ်းသည့်ကာလအတွင်း လုပ်ငန်းဆောင်တာများ	လျော့ပါးသက်သာစေရေး နည်းလမ်းများ
၅။	အမှိုက်စွန့်ပစ်မှု	• လုပ်ငန်းပိတ်သိမ်းသည့်အဆင့်တွင် သစ်သားနှင့် သံထည်အဝိုင်းအစများ၊ အလုပ်သမားများထံမှ တစ်ကိုယ်ရေသုံး ပစ္စည်းများထွက်ရှိခြင်း။ • အလုပ်သမားများနှင့် မိလ္လာကန် ဖျက်ဆီးခြင်းမှ တစ်ကိုယ်ရည်သုံးစွန့်ပစ်ရေ များထွက်ရှိခြင်း။ • အန္တရာယ်ရှိသော စွန့်ပစ်ပစ္စည်းများကို မှားယွင်းစွာ စွန့်ပစ်ခြင်း။	• အန္တရာယ်ရှိသော နှင့် အန္တရာယ်မရှိသောပစ္စည်းများကဲ့သို့သော အမျိုးအစားတစ်ခုကို အထူးကိုင်တွယ် စွန့်ပစ်ခြင်းဖြင့် ခွဲခြားစွန့်ပစ် စေခြင်းနှင့် အမှိုက် အမျိုးအစား အလိုက် သတ်မှတ်ထားသော ပုံးများနှင့် သင့်လျော်သော ခွဲခြားစွန့်ပစ်မှုများ ဆောင်ရွက်ခြင်း။ • အလုပ်သမားများအား ဘေးကင်းစွာ ကိုင်တွယ်ခြင်းနှင့် စွန့်ပစ်ခြင်းအတွက် လေ့ကျင့်သင်ကြားပေးခြင်း။ • အန္တရာယ်ရှိသော စွန့်ပစ်ပစ္စည်းများကို အန္တရာယ်ကင်းစွာ စွန့်ပစ်ရန်အတွက် အသိအမှတ်ပြုလက်မှတ်ရ စွန့်ပစ်ပစ္စည်းကုမ္ပဏီနှင့် ချိတ်ဆက်ဆောင်ရွက်ခြင်း နှင့် ပတ်ဝန်းကျင်ဆိုင်ရာ စည်းမျဉ်းစည်းကမ်းများနှင့်အညီ စွန့်ပစ်ခြင်း။
၆။	လူမှုစီးပွားအခွင့်အရေး (ကောင်းကျိုးနှင့်ထိခိုက်မှုများရှိစေခြင်း)	• ဒေသခံပြည်သူများအတွက် ယာယီ အလုပ်အကိုင်အခွင့်အလမ်းများ ရရှိလာပြီး စီးပွားရေးကောင်းမွန်စေခြင်း။ • ဆူညံသံနှင့်ဖုန်မှုန့်များကြောင့် ပတ်ဝန်းကျင် ကို ထိခိုက်စေခြင်း။ • ထွက်ရှိလာသော စွန့်ပစ်ပစ္စည်းများနှင့် စွန့်ပစ်ရည်များကြောင့် ကျန်းမာရေး ထိခိုက်စေနိုင်ခြင်း။	• အလုပ်အကိုင်အခွင့်အလမ်းများ ဖန်တီးပေးခြင်း၊ ဒေသတွင်း အသက်မွေးဝမ်း ကြောင်းများ ဖြင့်တင်ပေးခြင်းနှင့် စီးပွားရေးတိုးတက်မှုကို ဖြင့်တင်ပေးစေ ခြင်း။ • အလုပ်သမားများ ကျွမ်းကျင်မှုဖြင့်တင်ရန် လေ့ကျင့်ရေးများ ပံ့ပိုးပေးခြင်း။ • ဆူညံသံများလျော့ချနိုင်ရန် အတားအဆီးအကာအကွယ်များ စီမံဆောင်ရွက် စေခြင်း။ • အမှိုက်စွန့်ပစ်မှုများနှင့် ပတ်သက်၍ ပတ်ဝန်းကျင်ဆိုင်ရာ လုပ်ထုံးလုပ်နည်း များကို လိုက်နာဆောင်ရွက်စေခြင်း။ • အများသူငှာ သယ်ယူပို့ဆောင်ရေးစနစ်များကို အနောင့်အယှက်မဖြစ်စေရန် လုပ်ငန်းချိန်များကို သေချာစွာ အချိန်သတ်မှတ်ခြင်း။

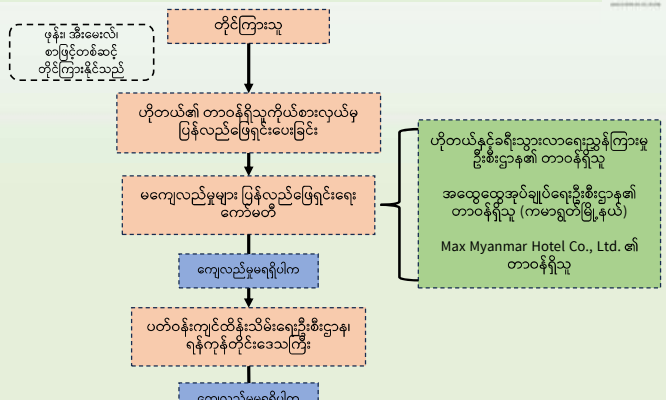
ဆိုးကျိုးများလျော့ပါးသက်သာစေရေးအစီအစဉ်များ

စဉ်	သက်ရောက်မှု	စီမံကိန်းပိတ်သိမ်းသည့်ကာလအတွင်း လုပ်ငန်းဆောင်တာများ	လျော့ပါးသက်သာစေရေး နည်းလမ်းများ
၇။	လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး	• လုပ်ငန်းဆောင်ရွက်စဉ် မတော်တဆ ထိခိုက်မှု ဒဏ်ရာများရရှိခြင်း။ • ဘေးအန္တရာယ်ကင်းရှင်းရေးအတွက် အစီအမံများကို လိုက်နာဆောင်ရွက်မှု မရှိခြင်း။ • ဓာတုပစ္စည်းထိတွေ့မှုများကြောင့် အရေပြားယားယံခြင်းနှင့် အသက်ရှူလမ်းကြောင်း ဆိုင်ရာပြဿနာများ ဖြစ်စေခြင်းနှင့် ဆူညံသံကြောင့် အကြားအာရုံထိခိုက်ခြင်း။	• သင့်လျော်သော PPE များ ဝတ်ဆင် အသုံးပြုစေခြင်း။ • မတော်တဆမှုများနှင့် ကျန်းမာရေးအရေးပေါ်အခြေအနေများအတွက် ရှေးဦး သူနာပြုနည်းနှင့် အရေးပေါ်တို့ပြန်မှုနည်းလမ်းများကို အလုပ်သမားများအား လေ့ကျင့်သင်ကြားပေးခြင်း။ • လုပ်ငန်းခွင်အတွင်း ပုံမှန်သန့်ရှင်းရေး ပြုလုပ်ခြင်း၊ မတော်တဆထိခိုက်မှုများ မရှိ စေရန် စက်ယန္တရားများ စနစ်တကျ ကိုင်တွယ်စေခြင်း။ • အရေးပေါ်အခြေနေများအတွက် လုပ်ငန်းစဉ်များ နှင့် အရေးပေါ်အခြေနေတို့ပြန်မှုအဖွဲ့များ ဖွဲ့စည်းထားရှိခြင်း။ • လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး အစီအမံများကို စနစ်တကျ လိုက်နာဆောင်ရွက်စေခြင်း။
၈။	မီးဘေးအန္တရာယ်	• စက်ပစ္စည်းများဖြတ်တောက်ခြင်း၊ လျှပ်စစ်မီးများ အသုံးပြုသောကြောင့် ရှေ့ဖြစ်ခြင်း၊ ဓာတ်လိုက်ခြင်းများ ဖြစ်ပေါ်နိုင်ခြင်း။ • ဒီဇယ်များသိုလှောင်ထားခြင်း။	• မီးလောင်လွယ်သော ကြွေးကျန်အမှိုက်များကို ဘေးကင်းစွာ ထိန်းသိမ်းစွန့်ပစ်ခြင်း နှင့် စနစ်ကျသော အမှိုက်စီမံခန့်ခွဲမှု စနစ်ဆောင်ရွက်ခြင်း။ • အလုပ်သမားများကို ပုံမှန်သင်တန်းများပေးခြင်း။ • အန္တရာယ်ရှိသော ပစ္စည်းနှင့် ဓာတုသိုလှောင်နေရာများအနီး ဆေးလိပ် သောက်ခြင်းမှ တားမြစ်စေခြင်း။ • အရေးပေါ်ကြိုတင်ပြင်ဆင်မှုနှင့် တုံ့ပြန်မှုများအတွက် နည်းလမ်းများ စနစ်တကျ ချမှတ်ဆောင်ရွက်စေခြင်းနှင့် လေ့ကျင့်သင်ကြားစေခြင်း။ • မီးလောင်မှုဖြစ်ပွားပါက ဆက်သွယ်ရန် မီးသတ်နှင့် အခြားအရေးပေါ် ဆက်သွယ်ရေး နံပါတ်များကို သိသာမြင်သာစွာ ကပ်ထားခြင်းနှင့် အသိပေးခြင်း။

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်

- ပတ်ဝန်းကျင် စီမံခန့်ခွဲမည့် အစီအစဉ်
- ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုသည့်အစီအစဉ်
  - ❖ လေအရည်အသွေး
  - ❖ ရေအရည်အသွေး
  - ❖ ဆူညံသံနှင့် တုန်ခါမှု
  - ❖ အခြားထွက်ရှိမှု စသည် -
- စွန့်ပစ်ပစ္စည်း စီမံခန့်ခွဲသည့် အစီအစဉ်
- လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး အစီအစဉ်
- အရေးပေါ်ကြိုတင်ပြင်ဆင်ခြင်းနှင့် တုံ့ပြန်ရေးအစီအစဉ် (မီးဘေးအန္တရာယ်နှင့် သဘာဝဘေးအန္တရာယ်များ)
- လူမှုစီးပွားတာဝန်ခံမှု အစီအစဉ်
- မကျေလည်မှုများကို ပြန်လည်ဖြေရှင်းပေးမည့် အစီအစဉ်

မကျေလည်မှုများကို ပြန်လည်ဖြေရှင်းပေးမည့်အစီအစဉ်



ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုမည့်နည်းလမ်းများ

- ကျန်းမာရေးနှင့်ဘေးအန္တရာယ်ကင်းရှင်းရေးတာဝန်ခံမှ တိုက်ရိုက်စောင့်ကြပ်ကြည့်ရှုခြင်း၊
- ပတ်ဝန်းကျင်ထိခိုက်မှုရှိ/ မရှိကို ပုံမှန်စစ်ဆေးခြင်းနှင့် တားမြစ်ထိန်းချုပ်ခြင်း၊
- ပြည်သူလူထု၏ အကြံပြုချက်များ၊ ဆွေးနွေးချက်များနှင့် ကန့်ကွက်မှုများအတွက် သတင်းများရယူပြီး ဖြေရှင်းဆောင်ရွက်ခြင်း၊
- တတိယအဖွဲ့အစည်းမှ စောင့်ကြပ်ကြည့်ရှုခြင်း

ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုသည့် အစီအစဉ် (စီမံကိန်းလည်ပတ်ရေးကာလ)

စဉ်	ပတ်ဝန်းကျင် သက်ရောက်မှု	တိုင်းတာမည့်နည်းလမ်း	တည်နေရာ	တိုင်းတာမည့်အကြိမ် အရေအတွက်
၁	လေအရည်အသွေး	တိုင်းတာမှဆောင်ရွက်ထားသည့်နည်းလမ်းအတိုင်း	Lat- 16 49' 11.49'' Long- 96 7' 51.46''	၆ လတစ်ကြိမ်
၂	ဆူညံသံနှင့် တုန်ခါမှု	တိုင်းတာမှဆောင်ရွက်ထားသည့်နည်းလမ်းအတိုင်း	Lat- 16 49' 11.49'' Long- 96 7' 51.46''	၆ လတစ်ကြိမ်
၃	ရေအရည်အသွေး	တိုင်းတာမှဆောင်ရွက်ထားသည့်နည်းလမ်းအတိုင်း	Lat- 16 49' 13.26'' Long- 96 7' 50.23''	၆ လတစ်ကြိမ်
၄	မြေဆောက်ရေ အရည်အသွေး	တိုင်းတာမှဆောင်ရွက်ထားသည့်နည်းလမ်းအတိုင်း	Lat- 16 49' 12.24'' Long- 96 7' 52.79''	၆ လတစ်ကြိမ်
၅	အနှံ့	တိုင်းတာမှဆောင်ရွက်ထားသည့်နည်းလမ်းအတိုင်း	Lat- 16 49' 10.50'' Long- 96 7' 53.78''	၆ လတစ်ကြိမ်
၆	အမှိုက်စွန့်ပစ်မှု	အမှိုက်စွန့်ပစ်မှု၊ အမှိုက်အမျိုးအစားများခွဲခြားခြင်းတို့အား စစ်ဆေးခြင်းနှင့် အလေ့အကျင့်များဆောင်ရွက်ပေးခြင်း	အမှိုက်စွန့်ပစ်သည့်နေရာ၊ မီးဖိုချောင်၊ ဧည့်သည်တော်အခန်းများနှင့် လုပ်ငန်းခွင်တည်နေရာ	လစဉ်
၇	စွမ်းအင်အသုံးချမှု	လျှပ်စစ်မီတာယူနစ်သုံးစွဲမှုတံတမ်းများထား၍၍ ပုံမှန် စစ်ဆေးခြင်း	လုပ်ငန်းခွင်တည်နေရာ	လစဉ်
၈	လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး	သင်တန်းနှင့် အလုပ်ခွင် သင်ကြားရေးများ၊ ဖြစ်ပေါ်သော အန္တရာယ်များကို မှတ်တမ်းထိန်းသိမ်းခြင်း၊ လေ့ကျင့်ခြင်း၊ ကာကွယ်ခြင်း၊ ဝန်ထမ်းများ၏ကျန်းမာရေးစီမံခန့်ခွဲမှုများဆောင်ရွက်ပေးခြင်း	လုပ်ငန်းခွင်တည်နေရာ	လစဉ်
၉	မီးဘေးအန္တရာယ်	မီးသတ်ဆေးဘူးများနှင့် လျှပ်စစ်သွယ်တန်းရေးစနစ်များကို ပုံမှန်စစ်ဆေးခြင်း၊ လောင်ကျွမ်းစေလွယ်သော ပစ္စည်းများကို စစ်ဆေးခြင်း	လုပ်ငန်းခွင်တည်နေရာ	လစဉ်

ပတ်ဝန်းကျင်စောင့်ကြပ်ကြည့်ရှုသည့် အစီအစဉ် (စီမံကိန်းပိတ်သိမ်းရေးကာလ)

စဉ်	ပတ်ဝန်းကျင် သက်ရောက်မှု	တိုင်းတာမည့်နည်းလမ်း	တည်နေရာ	တိုင်းတာမည့် အကြိမ်အရေအတွက်
၁	လေအရည်အသွေး	24 Consecutive hours per location (E PAS Has Scanner)	စီမံကိန်းဖျက်သိမ်းသည့်တည်နေရာ	တစ်ကြိမ်
၂	ဆူညံသံနှင့် တုန်ခါမှု	24 Consecutive hours per location (Digital Sound Level Meter for Noise and VM-55 Vibration meter for Vibration)	စီမံကိန်းဖျက်သိမ်းသည့်တည်နေရာ	တစ်ကြိမ်
၃	ရေအရည်အသွေး	Sampling and Measurement using field equipment and laboratory	စီမံကိန်းဖျက်သိမ်းသည့်တည်နေရာ	တစ်ကြိမ်
၄	အမှိုက်စွန့်ပစ်မှု	အမှိုက်ခွဲခြားစွန့်ပစ်ခြင်းနှင့် နှုပ်ခြင်း အလေ့အကျင့်များကို ပုံမှန်စစ်ဆေးမှုများ ပြုလုပ်ခြင်း	စီမံကိန်းဖျက်သိမ်းသည့်တည်နေရာ	တစ်ကြိမ်
၅	လုပ်ငန်းခွင်ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေး	အလုပ်ခွင်သင်တန်းများဆောင်ရွက်ပေးခြင်း	စီမံကိန်းဖျက်သိမ်းသည့်တည်နေရာ	အပတ်စဉ်
၆	မီးဘေးအန္တရာယ်	မီးသတ်ဆေးဘူးများ၊ လျှပ်စစ် သွယ်တန်းစနစ်များနှင့် လောင်ကျွမ်းလွယ်သောပစ္စည်းများ ထားရှိမှုကို ပုံမှန်စစ်ဆေးမှုများ ပြုလုပ်ဆောင်ရွက်ခြင်း	စီမံကိန်းဖျက်သိမ်းသည့်တည်နေရာ	အပတ်စဉ်

ကျေးဇူးအထူးတင်ရှိပါသည်။

Max Myanmar Hotel Co., Ltd. မှ ရန်ကုန်တိုင်းဒေသကြီး၊ အနောက်ပိုင်းခရိုင်၊ ကမာရွတ်မြို့နယ်၊ ပြည်လမ်း၊ မြေတိုင်းရပ်ကွက်အမှတ် (၃၇-F)၊ မြေကွက်အမှတ် (၆၅၊ ၆၆-ဘီ) တွင် အကောင်အထည်ဖော်ဆောင်ရွက်လျက်ရှိသည့် Novotel Yangon Max Hotel ဝန်ဆောင်မှုလုပ်ငန်း၏ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း (IEE) နှင့်ပတ်သက်၍ စီမံကိန်းအကြောင်းအရာများအား ရှင်းလင်းတင်ပြခြင်းနှင့် အများပြည်သူသဘောထားရယူခြင်း (Public Consultation Meeting) အခမ်းအနားသို့ တက်ရောက်သူများစာရင်း

အစိုးရဌာနဆိုင်ရာအဖွဲ့အစည်း

ရက်စွဲ။ ။၂၀၂၅ ခုနှစ်၊ မေ လ၊ (၂၁)ရက်

စဉ်	အမည်	ရာထူး	ဌာန	ဆက်သွယ်ရန်ဖုန်း	လက်မှတ်
၁	ဦးဝေလွင်ဝင်း	မြို့နယ် EO	မြို့နယ်စည်ပင်	09977275128	[signature]
၂	ဒေါ်မြင့်မြင့်ဦး	ဦးစီးမှူး	[illegible]	09412372354 0	[signature]
၃	Dr Thiri Naing	TMO	KBMAGCL UHC	097999909345	[signature]
၄.	Daw Thu Zar Myint	ဦးစီး	ဒီဇယ်ပုံ သဘော:	09-254940702	[signature]
၅.	ဦး [illegible]	ဦးစီး အကြီး	ပတ်ဝန်းကျင် [illegible]	09-797699602	[signature]
၆.	ဦးသန့်ထူးအောင်	ဒုတိယဦးစီးမှူး	"	09791687379	[signature]
7.	ဒေါ်ခင်မေမေ	ဌာနမှူး	[illegible]	09254881681	[signature]
8.	ဦး [illegible]	ဒုဦးစီးမှူး	[illegible]	09-899665388	[signature]

Max Myanmar Hotel Co., Ltd. မှ ရန်ကုန်တိုင်းဒေသကြီး၊ အနောက်ပိုင်းခရိုင်၊ ကမာရွတ်မြို့နယ်၊ ပြည်လမ်း၊ မြေတိုင်းရပ်ကွက်အမှတ် (၃၇-F)၊
မြေကွက်အမှတ် (၆၅၊ ၆၆-ဘီ) တွင် အကောင်အထည်ဖော်ဆောင်ရွက်လျက်ရှိသည့် Novotel Yangon Max Hotel ဝန်ဆောင်မှုလုပ်ငန်း၏
ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း (IEE) နှင့်ပတ်သက်၍ စီမံကိန်းအကြောင်းအရာများအား ရှင်းလင်းတင်ပြခြင်းနှင့် အများပြည်သူသဘောထားရယူခြင်း
(Public Consultation Meeting) အခမ်းအနားသို့ တက်ရောက်သူများစာရင်း

ရပ်မိရပ်ဖ ဒေသခံပြည်သူများ

ရက်စွဲ။ ။၂၀၂၅ ခုနှစ်၊ မေ လ၊ (၂၁)ရက်

စဉ်	အမည်	နေရပ်လိပ်စာ	အလုပ်အကိုင်	ဆက်သွယ်ရန်ဖုန်း	လက်မှတ်
၁	[illegible]	[illegible]	[illegible]	09·261033442	
၂	[illegible]	[illegible]	[illegible]	[illegible]	
၃	[illegible]	[illegible]	[illegible]	09 972509512	
၄	[illegible]	[illegible]	[illegible]	09·400557747	
၅	[illegible]	[illegible]	[illegible]	09-254007715	

Max Myanmar Hotel Co., Ltd. မှ ရန်ကုန်တိုင်းဒေသကြီး၊ အရှေ့ပိုင်းခရိုင်၊ ကမာရွတ်မြို့နယ်၊ ပြည်လမ်း၊ မြေတိုင်းရပ်ကွက်အမှတ် (၃၇-F)၊ မြေကွက်အမှတ် (၆၅၊ ၆၆-ဘီ) တွင် အကောင်အထည်ဖော်ဆောင်ရွက်လျက်ရှိသည့် Novotel Yangon Max Hotel ဝန်ဆောင်မှုလုပ်ငန်း၏ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း (IEE) နှင့်ပတ်သက်၍ စီမံကိန်းအကြောင်းအရာများအား ရှင်းလင်းတင်ပြခြင်းနှင့် အများပြည်သူသဘောထားရယူခြင်း

(Public Consultation Meeting) အခမ်းအနားသို့ တက်ရောက်သူများစာရင်း

ပြင်ပပုဂ္ဂလိကအဖွဲ့အစည်း/ကုမ္ပဏီများ ရက်စွဲ။ ။၂၀၂၅ ခုနှစ်၊ ဇွန်လ၊ (၂၁)ရက်

စဉ်	အမည်	ရာထူး	ကုမ္ပဏီအမည်	ဆက်သွယ်ရန်ဖုန်း	လက်မှတ်
၁	Khin Mg Myint	DOE	Novotel Yangon Max	09450011544	

Max Myanmar Hotel Co., Ltd. မှ ရန်ကုန်တိုင်းဒေသကြီး၊ အနောက်ပိုင်းခရိုင်၊ ကမာရွတ်မြို့နယ်၊ ပြည်လမ်း၊ မြေတိုင်းရပ်ကွက်အမှတ် (၃၇-F)၊
မြေကွက်အမှတ် (၆၅၊ ၆၆-ဘီ) တွင် အကောင်အထည်ဖော်ဆောင်ရွက်လျက်ရှိသည့် Novotel Yangon Max Hotel ဝန်ဆောင်မှုလုပ်ငန်း၏
ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း (IEE) နှင့်ပတ်သက်၍ စီမံကိန်းအကြောင်းအရာများအား ရှင်းလင်းတင်ပြခြင်းနှင့် အများပြည်သူသဘောထားရယူခြင်း

(Public Consultation Meeting) အခမ်းအနားသို့ တက်ရောက်သူများစာရင်း

INGOs/NGOs/ သတင်းမီဒီယာအဖွဲ့အစည်းများ

ရက်စွဲ။ ။၂၀၂၅ ခုနှစ်၊ မေ လ၊ (၂၁)ရက်

စဉ်	အမည်	အဖွဲ့အစည်း/ရာထူး	ဆက်သွယ်ရန်ဖုန်း	အီးမေးလ်လိပ်စာ	လက်မှတ်
၁.	ဦးမြင့်ကျော်ထွန်း	[illegible]	0950.39436		[signature]
၂.	[illegible]	[illegible]	09.[illegible]		[signature]
၃.	MAN. [illegible]	MAN	[illegible]		[signature]
၄.	ဦး[illegible]	MAN	〃		[signature]
၅.	ဒေါ်[illegible]	[illegible] MAN.	09254828475		[signature]
၆.	ဦး[illegible]	[illegible]	0943135480		[signature]

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