

6. IMPACT ASSESSMENT AND MITIGATION MEASURES

6.1. Impact Assessment Methodology and Approach

6.1.1 Introduction

The impact assessment methodology used in this Initial Environmental Examination (IEE) Report provides a basis to characterise the potential environmental and social impacts of the Project. The methodology is based on models commonly employed in impact assessment, and takes into consideration the International Finance Corporation (IFC) Performance Standards (PS). The IEE has been undertaken following a systematic process that evaluates the potential impacts the Project could have on aspects of the physical, biological, social/ socio-economic and cultural environment; identifies preliminary measures that the project will take to avoid, minimise/reduce, mitigate, offset or compensate for potential adverse impacts; and identifies measures to enhance potential positive impacts where practicable.

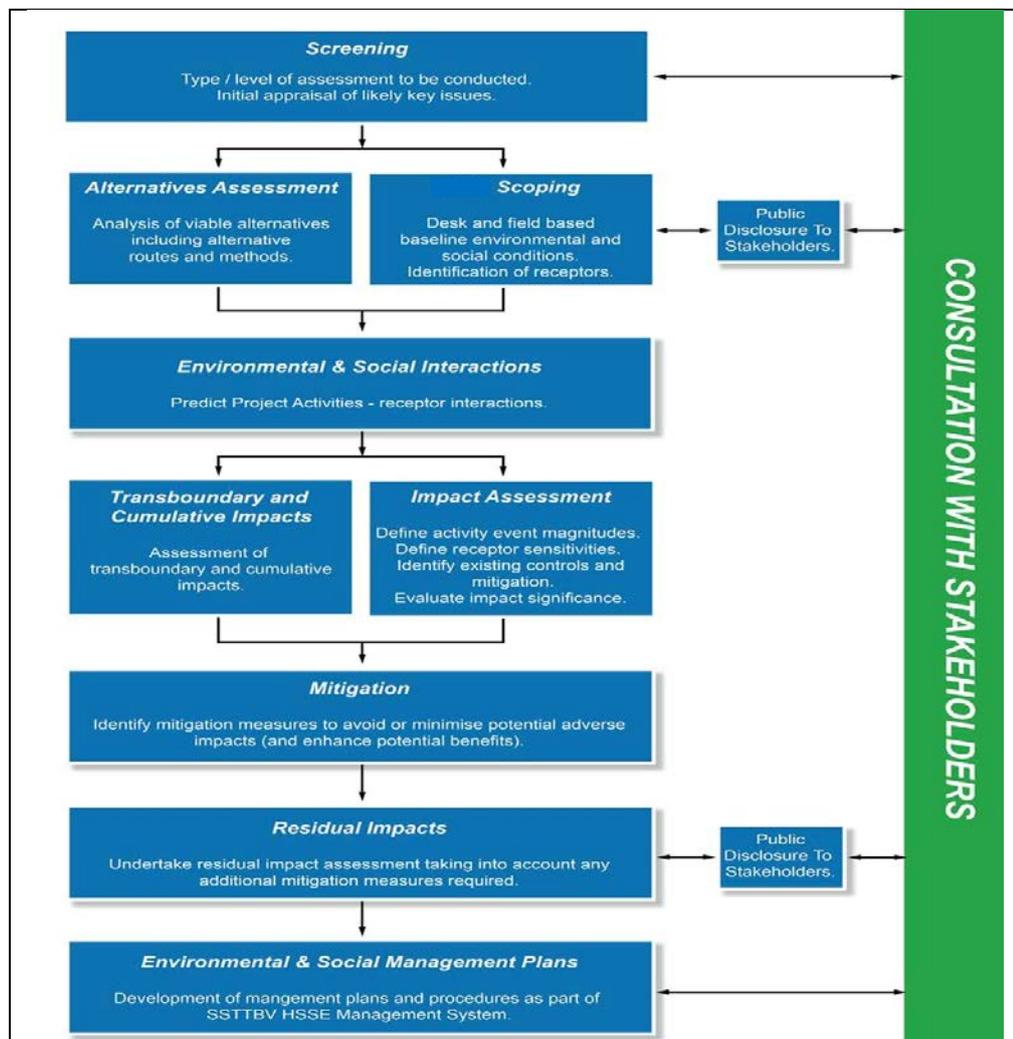


Figure 6.1-Overall Impact Assessment Process

6.1.2 Screening

Screening was the first stage undertaken during the IEE process to identify potential interactions between the project and existing physical, ecological, and human receptors. The screening process of this project has been conducted and the project proponent has discussed and agreed with the relevant authorities that an Initial Environmental Examination (IEE) study is required for the project.

6.1.3 Scoping

Scoping has been undertaken to provide further detail of potential environmental and social effects of the project using additional engineering and baseline data, to identify potential interactions between the project and resources/receptors in the area of influence and the impacts that could result from these interactions, and to prioritize these impacts in terms of their likely significance. The resources/receptors considered in the scoping stage, together with the potential impact changes are shown in the following table.

Table 6.1- Resources/Receptors and Potential Impacts Considered in Scoping

Resources/Receptors	Potential Impacts Changes
Environmental	
Geology	Changes to geology, geomorphology, topography
Air	Emissions of NO _x , SO _x , PM, CO, VOC, greenhouse gases (CO ₂ , CH ₄ and N ₂ O), ozone, TSP etc.
Noise and Vibration	Change in noise or vibration levels
Surface Water	Changes to physical, chemical or biological quality of rivers, lakes, seas and other surface water bodies; Introduction of exotic species, changes in habitat quality, abundance, diversity; Effluent discharge.
Groundwater	Contamination of shallow or deep groundwater resources, change in groundwater resources
Soil	Changes to physical and chemical properties and soil ecology
Vegetation	Changes to vegetation population, health, species abundance and diversity and impact on endangered and economic species, food chain effects
Wildlife	Changes to wildlife assemblages, impact on endangered and economic species, food chain effects
Sediments	River/waterbed morphology, physical and chemical properties, benthic organisms
Fisheries	Changes in fisheries productivity
Aesthetics	Physical presence of facilities, increased night time light
Waste	Generation of wastes – hazardous and non-hazardous
Social / Socio-economic	
Population and physical displacement	Changes in total population, gender ratio, age distribution. Physical displacement from residence as a result of Project and its activities
Social	Disruption in local authority and governance structure; change in

and Cultural Structure	social behaviours; alteration to social and cultural networks; intra and inter-ethnic conflict
Economy and employment	Change in national/local economy, employment, standard of living, occupation
Resource ownership and use	Temporary or permanent restriction for accessing or using land or water, changes in livelihood activities based on natural resources; changes in ownership of such resources.
Cultural Resources	Physical disturbance of shrines, burial grounds, archaeological resources or other desecration or change in access to cultural resources, rituals or celebrations carried out in their premise.
Education and skills	Change in availability or quality of education or skills provision, supply and demand in certain skill set etc.
Infrastructure and public services	Improvement or pressure on existing urban/rural infrastructure or services including: transportation; power, water, sanitation, security, waste handling facilities etc.
Community Health and Safety	
Mortality and Key Health Indicators	Change in the mortality profile of the community; changes in life expectancy, birth rates, death rates, maternal mortality rates etc.
Environmental Change	Decreased air quality (e.g. NO _x , SO _x , VOC, CO, PM), contamination of surface waters and potable ground water, increased vibration and noise, increased night time light beyond acceptable limits, changes to the visual environment.
Communicable and Non-Communicable Diseases	Change in incidence and/or prevalence of communicable and non-communicable diseases or disease-causing factors
Vector Borne Diseases	Changes in the incidence and/or prevalence of vector-borne diseases, the density of these vectors and their breeding grounds.
Sexually Transmitted Diseases	Changes in the incidence and/or prevalence of sexually transmitted diseases and the factor that contribute to this (external workforce, transport routes etc.)
Nutritional Status	Change in nutritional status and food security
Health Care/Recreational Facilities	Changes in availability of and access to health care and recreational facilities including green space
Psychosocial/Lifestyle Factors	Drug use/abuse, prostitution, communal violence, crime, suicide and depression; changing expectations of quality of life
Community Safety	Risk to community safety includes water sanitization and drowning hazards in pool and sea place.

6.1.4. Impact Assessment Framework

The process for assessing potential project impacts is illustrated in figure below and involved:

- *Prediction:* What will happen to the environment as a consequence of this project (i.e. defining Project Activities and impacts)?
- *Evaluation:* Will it have a beneficial or adverse effect? How big is the change expected to be? How important will it be to the affected receptors?
- *Mitigation:* If the impact is of concern, can anything be done to avoid, minimise, or offset the impact? Or to enhance potential benefits?

- *Residual Impact:* After mitigation, is the impact still of concern?

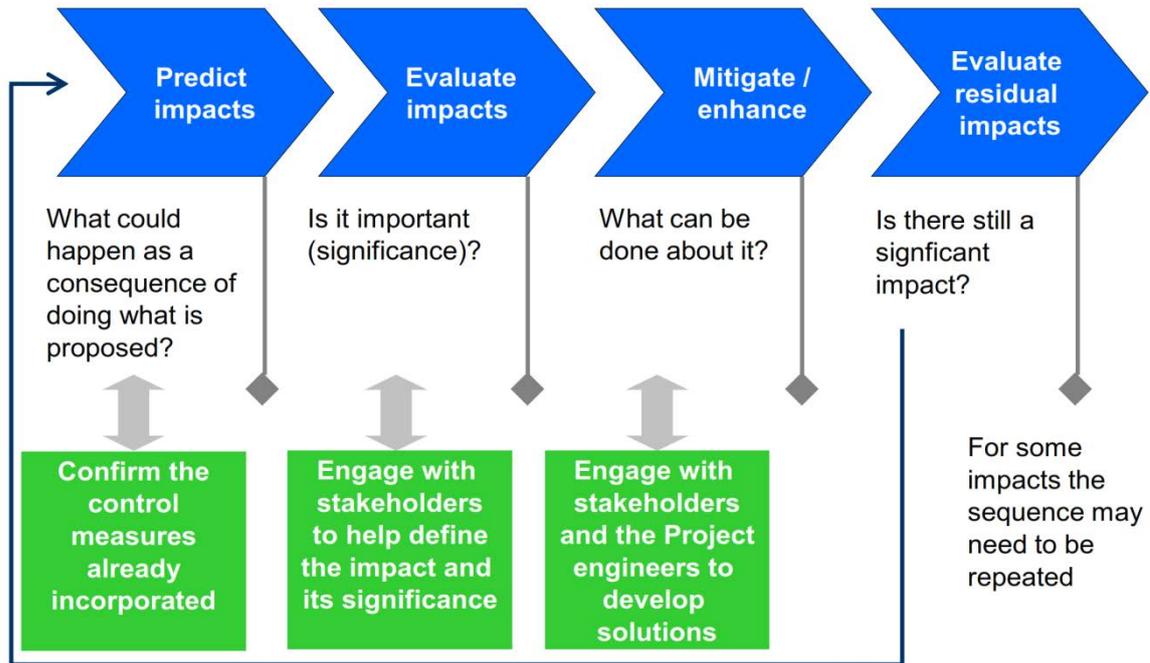


Figure 6.2- Impact Identification and Assessment Process

Impact significance was assessed with and without mitigation measures in place. The impact significance without mitigation measures was assessed with the design controls in place. Impacts without mitigation measures in place are not representative of the Project's actual extent of impact, and are included to facilitate understanding of how and why mitigation measures were identified.

The residual impact is what remains following the application of mitigation and management measures, and is thus the final level of impact associated with the development of the Project. Residual impacts also serve as the focus of management and monitoring activities during Project implementation to verify that actual impacts are the same as those predicted in this IEE report.

For some types of impact there are empirical, objective and established criteria for determining the potential impact significance (e.g. if a standard is breached or a protected area is damaged). However, in other cases assessment criteria are more subjective and require professional judgement to a greater degree. The criteria against which the significance of planned impacts was evaluated, for the purposes of this Project, has been described in terms of two components: impact magnitude (Section 6.1.4.3) and receptor sensitivity (Section 6.1.4.4). The assessment of unplanned impacts is described in Section 6.1.4.6.

6.1.4.1 Activities and Impacts

Building upon the process conducted during the Scoping Stage, Project activities and potential environmental, socio-economic and cultural heritage impacts upon receptors were further defined. For this purpose, the definition of a Project impact was adapted from ISO14001:2004 as:

- “Any change to the environment [or social receptors], whether adverse or beneficial, wholly or partially resulting from an organization's environmental [or social] aspects.”

Definitions of an ‘activity’ and a ‘receptor’ are not included within ISO 14001:2004, but for the purposes of this Project the following definitions are provided:

A Project activity is considered to be:

- A physical action or presence of infrastructure associated with the operation of Project plant, equipment or vehicles, or the actions of Project employees.

A Project receptor is considered to be:

- Someone or something that could be influenced by the Project, including human health, water resources, air quality, ecological habitats or species, cultural heritage assets, and the wider environment.

An impact therefore represents the effect of an interaction of a Project activity with the physical, ecological and human receptor. Two examples of these relationships are provided in the following figure.

Term	Example 1	Example 2
ACTIVITY	Use of diesel generator set	Generation of wastewater
↓		
RECEPTOR	Air quality and climate	Seawater quality
↓		
IMPACT	Deterioration of air quality, global warming	Environmental degradation, economic losses

Figure 6.3- Examples of Project Activity - Impact Pathways

Project activities were identified through a review of the Project Description (Chapter 4 Project Description). Potential impacts were identified based on the details of Project

activities and their potential interactions with the surrounding environment (and physical, ecological, and/or human receptors). This also required an understanding of the potential sources of impacts and impact pathways, and was supported by:

- An understanding of baseline conditions and potential receptors (Chapters 5);
- The spatial and temporal extent of the Project Area of Influence (Chapter 1 Introduction);
- Information from stakeholders, including authorities, experts, and the public (Chapter 8 Stakeholder Engagement); and
- Professional knowledge and experience of comparable projects or developments.

To some extent, the identification and understanding of Project Activities and impacts was an iterative process conducted throughout the IEE process as more project and environmental and social baseline information became available.

6.1.4.2 Impacts Nature and Type

Whether an impact is considered to be beneficial or adverse (impact nature), and the way in which it is related to the project (impact type, e.g. direct, indirect) are relevant to the IEE process. In particular, the degree to which an impact may be managed or modified by the mitigation measures is dependent upon the impact nature and type.

Table 6.2- Impact Assessment Terminology

Term	Definition
<i>Impact Nature</i>	
Adverse Impact	An impact that is considered to represent an adverse change from the baseline condition or introduces a new undesirable factor.
Beneficial Impact	An impact that is considered to represent an improvement on the baseline condition or introduces a new desirable factor.
<i>Impact Type</i>	
Direct Impact	Impacts that result from a direct interaction between a Project Activity and the receiving environment (e.g. between occupation of an area of seabed and the habitats which are lost).
Indirect Impact	Impacts that result from other activities that are encouraged to happen as a consequence of the Project (e.g. Project implementation promotes service industries in the region).
Secondary Impact	Impacts that follow on from the primary interactions between the Project and its environment as a result of subsequent interactions within the environment (e.g. loss of part of a habitat affects the viability of a species population over a wider area).
Cumulative Impact	Impacts that act together with other impacts, from other projects or unrelated activities, to affect the same environmental resource or receptor.

In considering impacts related to this project, both adverse and beneficial impacts have been identified. Where appropriate, the impact assessment chapters further identify impacts as direct, indirect or secondary impacts. Where appropriate, both impact nature and type definitions have been applied throughout the IEE report to provide clarity regarding the significance of the impacts.

6.1.4.3. Impact Magnitude

The magnitude of an impact is a measure of change from baseline conditions. This measure of change can be described in terms of its:

- Extent: spatial extent (e.g. area impacted) or population extent (e.g. proportion of the population or community affected) of an impact;
- Duration: how long the impact will interact with the receiving environment;
- Frequency: how often the impact will occur; and
- Reversibility: how long before impacts on receptors cease to be evident.

Thus, these characteristics collectively describe the nature, physical extent, and temporal condition of the impact.

To facilitate a structured description of impact magnitude, a qualitative scale was applied, ranking the magnitude of changes as negligible, low, moderate, or high developed for each of the magnitude characteristics.

The criteria for each of these impact magnitude categories (i.e. negligible, low, moderate and high ranking criteria) were developed as appropriate for each discipline

6.1.4.4. Receptor Sensitivity (Resilience and Value)

Receptor sensitivity is the degree to which a particular receptor is more or less susceptible to a given impact. Receptor sensitivity takes into consideration the receptor's resilience and value. Receptor resilience (or conversely, vulnerability) describes the ability of the receptor to withstand adverse impacts. It takes into consideration not only activity-impact-receptor pathways, but also environmental characteristics of the receptor that might make it more or less resilient to change.

As such, a receptor can be considered as existing within a spectrum of 'vulnerable' to 'resilient', with the former more likely to experience significant impacts as a result of a given change.

Receptor value takes into consideration its quality and its importance as represented, for example, by its conservation status, its cultural importance and / or its economic value. It

recognises that, for a given magnitude impact, different receptors (either directly or indirectly) may be deemed to be of greater importance and as such the significance of the impact is greater than the impact magnitude alone.

Table 6.3- Example Definitions of Receptor Sensitivity

Sensitivity of Receptor	Example Definitions of Receptor Components			
	Abundance or quantity	Condition	Adaptability	Value
Low	Typically found/ Similar abundance in all area.	In a good and tolerant condition. Has experienced similar level of change, which was acceptable.	Immediately adapts and accepts changes without difficulties.	Valuable but not site specific.
Medium	Abundance is limited in some areas.	Under some stressed condition.	Adapts/accepts changes with some difficulties.	Valuable at local level, in current situation or under the protection of the law.
High	Very scarce. Specific characteristics.	Under high pressure and tend to worsen.	Cannot withstand the increasing pressure and experiences negative, permanent changes.	Highly valuable at the national and international level, or under the protection of the law.

6.1.4.5. Impact Significance

Impact magnitude and receptor sensitivity were used to assess impact significance according to the impact assessment matrix and the impact assessment definitions are shown in the following Tables.

The matrix and significance definitions below have been used to assess adverse impacts of the project. It is important to note that impact prediction and evaluation take into account any embedded controls (i.e., physical or procedural controls that are already planned as part of the project design, regardless of the results of the IEE Process). This avoids the situation where an impact is assigned a magnitude based on a hypothetical version of the Project that considers none of the embedded controls. Although beneficial impacts of the project are identified within this IEE, beneficial impacts have not been assessed in terms of receptor sensitivity or impact magnitude.

Table 6.4- Impact Significance

		Sensitivity/Vulnerability/Importance of Resource/Receptor			
		Negligible	Low	Medium	High
Magnitude of Impact	Negligible	Not significant	Not significant	Not significant	Not significant/Low*
	Small	Not significant	Low	Low/ Moderate [†]	Moderate
	Medium	Not significant	Low/ Moderate	Moderate	High
	Large	Low	Moderate	High	High

*Allow technical discipline author to decide if impact significance is Not Significant or Low.

†Allow technical discipline author to decide if impact significance is Low or Moderate.

Table 6.5- Impact Significance Definitions

Adverse Impacts	High	Significant. Impacts with “high” significance are likely to disrupt the function and value of the resource/receptor, and may have broader systemic consequences (e.g. ecosystem or social well-being). These impacts are a priority for mitigation in order to avoid or reduce the significance of the impact.
	Moderate	Significant. Impacts with “moderate” significance are likely to be noticeable and result in lasting changes to baseline conditions, which may cause hardship or degradation of the resource/receptor, although the overall function and value of the resource/receptor is not disrupted. These impacts are a priority for mitigation in order to avoid or reduce the significance of the
	Low	Detectable but not significant. Impacts with “low” significance are expected to be noticeable changes to baseline conditions, beyond natural variation, but are not expected to cause hardship, degradation, or impair the function and value of the resource/receptor. However, these impacts warrant the attention of decision-makers, and should be avoided or mitigated where practicable.
	Not significant	Not Significant. Any impacts are expected to be indistinguishable from the baseline or within the natural level of variation. These impacts do not require mitigation and are not a concern of the decision-making process.

6.1.4.6. Unplanned Events

Environmental and social impacts that might result from unplanned events (e.g. fuel spill or wet buckle). In addition to impact magnitude and receptor sensitivity, the impact assessment methodology for unplanned events also considered the likelihood of occurrence of the event(s). The likelihood of an unplanned event occurring is designated using a qualitative scale, as described in the following Table.

Table 6.6- Definitions of Likelihood Designations (for Unplanned Events only)

Likelihood	Definition
Unlikely	The event is unlikely but may occur at some time during normal operating conditions.
Possible	The event is likely to occur at some time during normal operating conditions.
Likely	The event will occur during normal operating conditions (i.e., it is essentially inevitable).

6.1.5. Impact Mitigation

As part of the IEE process, where the impact assessment identified impacts as potentially arising, mitigation measures were developed (including avoidance, management and monitoring strategies). Where an adverse impact is identified, the next step is to find a way to avoid or minimise the impact.

The process of identifying “design controls” and “mitigation measures” considered the mitigation hierarchy (Figure below), as specified in IFC PS1, which is widely regarded as a best practice approach to managing risks.

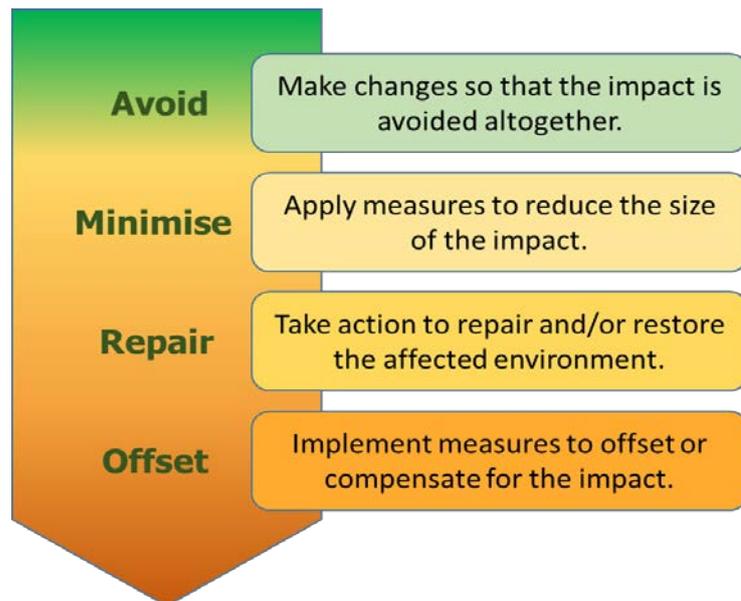


Figure 6.4- The Mitigation Hierarchy

Avoid

Avoid at Source: avoiding at source through the design of the project (e.g., avoiding by siting or re-routing activity away from sensitive areas);

Minimise

Reduce at Source: reducing at source through the design of the project (e.g., reducing by restricting the working area or changing the time of the activity);

Abate on Site: add something to the design to abate the impact (e.g., pollution control equipment, traffic controls, perimeter screening and landscaping);

Abate at Receptor: if an impact cannot be abated on-site then control measures can be implemented off-site (e.g., noise barriers to reduce noise impact at a nearby residence or fencing to prevent animals straying onto the site);

Repair

Repair or Remedy: some impacts involve unavoidable damage to a resource (e.g. agricultural land and forestry due to creating access, work camps or materials storage areas) and these impacts can be addressed through repair, restoration or reinstatement measures; and

Offset

Compensate in Kind, Compensate Through Other Means: where other mitigation approaches are not possible or fully effective, then compensation for loss, damage and disturbance might be appropriate (e.g., planting to replace damaged vegetation, financial compensation for damaged crops or providing community facilities for loss of fisheries access, recreation and amenity space).

The priority in mitigation is to first apply mitigation measures to the source of the impact (i.e., to avoid or reduce the magnitude of the impact from the associated Project activity), and then to address the resultant effect to the resource/receptor via abatement or compensatory measures or offsets (i.e., to reduce the significance of the effect once all reasonably practicable mitigation measures have been applied to reduce the impact magnitude).

6.1.6. Residual Impact Assessment

Once feasible mitigation measures were identified and agreed, the IEE team reassessed the potential impacts, assuming the mitigation measures were effectively implemented as planned.

In general, impacts with “Not Significant” or “Low” significance residual impact significance were not considered to be of concern to the development of the project. For adverse impacts of “Moderate” and “High” significance, an iterative process is undertaken to further investigate opportunities for mitigation, according to the hierarchy above. Where the significance cannot be further reduced, an explanation is provided of why further reduction is not practicable. Monitoring is required to confirm the measures used to mitigate adverse impacts are working properly and that the impact is not worse than predicted.

6.2. Impact on Physical Environment

(a) Land Use

The proposed site is in the coastal plains and is slightly undulating on the Bo Wei Island. The site surroundings comprise of virgin forest land and the land use in the surrounding area comprises of no residential set up. No industrial area is observed in nearby vicinity.

Therefore, it can be adhered that the proposed development of beach resort will change the present land use pattern of the area.

(b) Topography

The proposed development will involve some change in the topography of the area by the erection of buildings and this will change the existing pattern of surface drainage. As the proposed site is lying in the coastal plain and have slightly undulating terrain with a contour difference of 5 m in the highest and lowest part of the land. The construction activities will proceed in a manner so as to maintain the natural slope of the area by proper leveling of land, as and when required. Therefore no significant impact is anticipated on the local topography of the area.

(c) Mature and Coastal Vegetation

Removal of mature island vegetation for construction of infrastructure can generate environmental effects that can reduce protection of the island from increased wind speed as

well as affect low vegetation types such as bushes and shrubs due to decreased shelter. Similarly, removal of coastal peripheral vegetation for construction of beach bars, jetties, piers and other coastal structures can lead to accelerated beach erosion and alteration of natural ecological succession of the island vegetation. This vegetation removal will result in reduction in habitat cover for the birds and animals in the island. The project owner has selected location that does not have many trees to be removed during land clearing for construction of buildings; enough vegetation is required to be left untouched to conceal buildings as much within the vegetation. They are only clearing of shrubs and small trees in the small area identified for the construction of villas. The rest of the islands will be left as it is and hence will not hamper the habitats significantly.

6.3. Air Environment

6.3.1. Impact on Air Environment during Construction Phase

Construction activities related to the proposed Project will result in limited short term air quality impacts. Dust in term of Total Suspended Particulates (TSP) and fine particles (PM₁₀ and PM) are the key pollutants during construction. Emissions from construction worker vehicles and construction equipment are anticipated to have minimal short-term impacts.

Potential impacts to air quality and dust from the project may occur due to the following activities:

- Deforestation of around 1 acres each in the islands to make it suitable for making buildings and roads
- Site preparation activities of hotel building and relates facilities including site clearing and grubbing, excavation and filling, and construction of access road; and
- Vehicle movement on dirt road.

The construction phase will long approximately as 12 months and all of the impacts during construction phase are short-term, temporary and will not be significance. The following table shows the number of vehicles will use in the construction phase.

No.	Construction activities	vehicles	workers	Duration
1	Deforestation	-	(10)	1 month
2	Minor Site/ land clearing	Dozer (1)	(10)	15 days
3	Sand leveling	Track (2)	(15)	1 month
4	Manpower site clearing	-	(30)	1 month
5	Building Infrastructure	-	(55)	8 month

(a) Fugitive Dust Emissions

Fugitive dust emissions from site preparation activities and vehicles transportation on dirt roads are anticipated to have short-term impacts for approximately 12 months of Phase 1 construction phase. This might lead to increase in dust particles near construction site and roads, but those increases would be short-term in duration. The sensitive receptors/resources may be affected by potential impacts to air quality. The nearest sensitive receptor is construction workers only because no residences/communities on the island. The receptor sensitivity is considered low.

The significance of potential impacts to air quality is assessed in the following table

Impact	Fugitive dust emissions associated with the site preparation activities of resort development and related facilities including site clearing and grubbing, excavation and filling, and vehicle movement on dirt road. Dust dispersion can lead to a temporary deterioration in air quality by increasing TSP and PM ₁₀	
Dimension	Rating	Description
Nature	Negative	Potential Impact to air quality is considered to be negative.
Type	Direct	Direct impact through the generation of dust from site preparation and transportation on unpaved roads.
Duration	Short-term	Particulate matter will be produced during the construction phase
Extent	Local	Be restricted to the immediate vicinity of the site
Magnitude	Large	Air quality is possible and could increase TSP and PM ₁₀ . The highest cumulative dust concentration is expected to exceed the ambient PM ₁₀ standard of 24-hour Interim 1 (150 µg/m ³) in some locations. Impact magnitude is considered to be large. However, the impacts are expected to be limited, localized (within 100 m from the worksite boundary) and short-term (i.e., throughout the construction period of 12 months).
Receptor/ Resource Sensitivity	Low	Existing air quality in the project area is shown to be within the Myanmar National Environmental Guideline which is typical in forest Island areas and receptors in the vicinity are expected to potential impact to air quality. The nearest sensitive receptor is construction workers only because no residences/communities on the island. The receptor sensitivity is considered low.
Significance	Moderate	The combination of a Large Impact Magnitude and Low Resource Sensitivity will result in an overall Moderate Impact.

Mitigation Measures

The following dust suppression measures and good site practices are recommended for the construction phase:

- Minimize the amount of disturbance and areas cleared of vegetation
- Re-vegetate disturbed areas as soon as possible after disturbance
- Use dust abatement techniques on unpaved, un-vegetated surfaces
- Enact fugitive dust and vehicle emission controls

- Establish and enforce speed limits to reduce airborne fugitive dust
- Water spraying of or covering all exposed areas, access roads and stockpiles;
- Cleaning wheels and the lower body parts of trucks at all exits of the construction site;
- Watering the main haul road regularly to suppress dust emissions during truck movement;
- Prohibiting the burning of waste or vegetation on site;
- Maintaining and checking the construction equipment regularly;
- When feasible, shut down idling construction equipment
- Keep soil moist while loading into dump trucks to minimize fugitive dust
- Keep soil loads below the freeboard of the truck to minimize fugitive dust
- Minimize drop heights when loaders dump soil into trucks
- Tighten gate seals on dump trucks
- Cover dump trucks before traveling on public roads
- When possible, schedule construction activities during periods of low winds to reduce fugitive dust

(b) Vehicular Emission

During construction, the project will involve the movement of equipment in the construction areas such as dozer, trucks and transportation boats etc., which will contribute to gases emissions from the combustion of fuel. The most prevalent gases emitted from vehicle exhaust by fuel combustion are CO, CO₂, C₆H₆, and NO_x. The gases or greenhouse gas (GHG) emissions that are likely to be emitted by the project, as related to the issue of climate change. The significance of potential impacts to gases emission during construction of project is assessed in the following table.

Impact	Potential impacts on climatic condition due to gases emissions.	
Dimension	Rating	Description
Nature	Negative	Potential Impact to air quality is considered to be negative.
Type	Direct	Potential impacts would likely be direct impacts through the release of emissions from combustion process of construction equipment.
Duration	Long-term	Many of the major greenhouse gases can remain in the atmosphere for tens to hundreds of years after being released.
Extent	International	Greenhouse gases can potentially affect the Earth's climate.
Magnitude	Negligible	Minor emissions of gases will be emitted as a result of the project. Magnitude is considered Negligible.
Receptor/ Resource Sensitivity	Low	Minor emissions of gases will be emitted as a result of the project, and not likely to significantly change atmospheric GHG concentrations. Receptor/resource sensitivity is rated as Low.

Significance	Not significant	The combination of a Low resource sensitivity and Negligible impact magnitude will result in an overall Not significant potential impact.
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Mitigation Measures

The following measures will be put in place for the project during construction to reduce gases emissions:

- Huge reduction in emissions from vehicle and equipment can be achieved by upgrading the engines
- Maintain vehicle and equipment according to manufacturers' specifications.
- Switching off engines when idling.
- Vehicle / equipment exhausts observed to be emitting significant black smoke from their exhausts will be serviced/ replaced.

6.3.2. Impact on Air Environment during Operation Phase

Potential air emissions generated from operation of resort facilities include products of combustion (e.g. carbon dioxide, nitrogen and sulfur oxides, and hydrocarbons) and particulates from fossil fuel- operated stoves and power generators. Tourism facilities may emit greenhouse gases (GHG) and volatile organic compounds (VOC) from dry-cleaning, refrigeration, air conditioning services and cooking in restaurant.

The significance of potential impacts to greenhouse gas during operation phase is assessed in the following table.

Impact	Potential impacts on climatic condition due to gases emissions.	
Dimension	Rating	Description
Nature	Negative	Potential Impact to air quality is considered to be negative.
Type	Direct	Potential impacts would likely be direct impacts through the release of emissions from combustion process of power generators and tourism facilities equipment.
Duration	Long-term	Many of the major greenhouse gases can remain in the atmosphere for tens to hundreds of years after being released.
Extent	International	Greenhouse gases can potentially affect the Earth's climate.
Magnitude	Negligible	Minor emissions of gases will be emitted as a result of the project. Magnitude is considered Negligible.
Receptor/ Resource Sensitivity	Low	Minor emissions of gases will be emitted as a result of the project, and not likely to significantly change atmospheric GHG concentrations. Receptor/resource sensitivity is rated as Low.
Significance	Not significant	The combination of a Low resource sensitivity and Negligible impact magnitude will result in an overall Not significant potential impact.

Mitigation Measures

The following measures will be put in place for the project during operation to reduce gases emissions:

- Gases Filters are installed to reduce the GHG emissions from power generator.
- Use of ozone depleting refrigerants should be avoided, and refrigerants with low global warming potential (GWP) should be selected.
- Maintain vehicle and equipment according to manufacturers' specifications.

6.4 Noise Environment

6.4.1. Impact on Noise Environment during Construction Phase

The noise emission sources during construction phase will include construction machineries/equipments to be employed at site. The expected noise levels from the operation of equipment and machineries are provided in Table below:

Typical Construction Equipment Noise Emission Levels

Equipment Type	Noise Level (dBA at 50 Feet)
Dozer	87
Truck (Medium and Heavy)	84
Concrete Mixer	85
Generator	82

Source: Harris, C.M. "Handbook of Noise Control," 1979

All of the predicted noise level during construction phase will be based on Patrick Breysse, and Peter S.J. Lees., School of Public Health, Johns Hopkins University, Bloomberg, 2006.

It is necessary to calculate the overall noise level produced by the simultaneous operation of several pieces of equipment. The overall noise level at a receptor is simply the sum (on an energy basis) of the individual contributions of each piece of equipment. Mathematically, the overall noise level at a receptor from several sources can be calculated using Equation 6-1:

$$L_{eq}(site) = 10 * \log_{10} \left(\sum_{i=1}^n 10^{Leq(equipment)_i/10} \right) \quad \text{Equation 6-1}$$

Where

$L_{eq}(site)$ = the A-weighted, overall equivalent sound level obtained by summing the individual equipment noise levels on an energy basis.

n = Number of sources

$L_{eq}(equipment)$ = the A-weighted, equivalent sound level at a receptor resulting from the operation of a single piece of equipment at distance D from source, dB(A).

Site clearing and earth working vehicle (1 dozer) and delivery vehicles (2 trucks) traveling to and from the site will produce noise which increase existing noise in construction phase 1 land clearing activities, leveling and excavation work. This overall equivalent sound level obtained about 85.2 dB(A) at 15 m (about 50 feet) distance as follow:

$$Leq = SPL_{site} = 10 \log \left(\frac{10^{8.7} + 10^{8.4} + 10^{8.4}}{3} \right)$$

$$= 85.2 \text{ dB(A)}$$

The major noise generating sources during the construction phase 2 (hotel building and related facilities) will be movement of trucks, operation of concrete mixer and generator. If most of the construction machineries (concrete mixer, generator, truck etc.) are running at the same time, This overall equivalent sound level obtained about 83.87 dB(A) at 15 m (about 50 feet) distance as follow:

$$Leq = SPL_{site} = 10 \log \left(\frac{10^{8.5} + 10^{8.4} + 10^{8.4} + 10^{8.2}}{4} \right)$$

$$= 83.87 \text{ dB(A)}$$

The sound pressure level in dependence of the distance from a source can be calculated using the equation 6.2 as follow;

$$L_2 = L_1 - \left| 20 \cdot \log \left(\frac{r_1}{r_2} \right) \right| \quad \text{Equation 6-2}$$

Where

L_2 = the A-weighted, equivalent sound level at a receptor resulting from the operation of a single piece of equipment at distance D (dB(A))

L_1 = Noise emission level of the particular piece of equipment at reference distance D (dB(A))

r_1 = Distance from the receptor to the piece of equipment (m)

r_2 = Reference distance where the source noise emission level was measured (m), i.e. 50 ft (15.24 m)

The noise level expected at various distances from sources during the construction phase is shown in the following Table.

Distance from Source (m)	Noise Level (dB)	
	construction phase 1	construction phase 2
1	108.72	107.39
5	94.74	93.41

15	85.2	83.87
30	79.18	77.85
50	74.74	73.41
100	68.72	67.39
200	62.7	61.37
500	54.74	53.41
1000	48.72	47.39
1500	45.2	43.87
Myanmar National Environmental Quality (Emission) Guidelines value	55 (Residential, Institutional, Educational)	

The noise levels in dependence of the distance from a source (above table) are expected to be a major source of noise generation within the project site and its surroundings. If improperly managed, there is risk of nuisance and health effects to nearby residents and construction workers onsite. Although there are no residential area on the island, impacts on fauna diversity is considerable. According to the Myanmar National Environmental Quality (Emission) Guidelines value, a distance from construction site boundary to acceptable sensitive receiver is 500 m and above. The impact rating for long term exposure (for construction period of twelve months) and a Daytime Noise Level (Leq) of less than 55 dB is equivalent to a negligible potential impact magnitude.

The significance of potential impacts to noise during construction phase is assessed in table below.

Impact	Potential impacts on increased noise from construction equipment.	
Dimension	Rating	Description
Nature	Negative	Potential impacts to noise would be considered to be adverse (negative).
Type	Direct	Potential impacts would likely be direct impacts through the noise emission sources from construction activities.
Duration	Short-term	noise will be produced during the construction phase
Extent	Local	Noise impacts would be limited to the project area and vicinity, and hence would be considered to be local.
Magnitude	Negligible	Outside 500m around of project site daytime Noise Level (Leq) of 74.47dB and 53.41 dB are equivalent to negligible potential impact magnitude.
Receptor/ Resource Sensitivity	Low	There are no residential area on the island, the representative NSR of fauna diversity is located away from the project approximate 1 km, the receptor/resource sensitivity is rated as Low.
Significance	Not significant	The combination of a Low resource sensitivity and Negligible impact magnitude will result in an overall Not significant potential impact.

Mitigation Measures

- Avoid running construction machineries at the same time; and also to avoid working at night.
- No employee should be exposed to a noise level greater than 85 dB (A) for a duration of more than 8 hours per day without hearing protection. In addition, no unprotected ear should be exposed to a peak sound pressure level (instantaneous) of more than 140 dB(C);
- Ensure that all contractors on site have effectively controlled noise levels from equipment. Effective noise controls include: regular inspection and maintenance of all vehicles and construction equipment working onsite, installation of sound suppressive devices (such as mufflers) on all mechanical plants as necessary, where practicable, vehicles and machinery that are used intermittently should not be left idling for long periods of time;

6.4.2. Impact on Noise Environment during Operation Phase

During operation, the areas and sources of noise emissions include power generator room, kitchens and laundries, garages, entertainment areas, and lobby areas. All equipment will be accommodated inside building, quantitative assessment is considered not necessary for the operation phase. There may be some minor noise emitted from the operation of power generator. The generators are proposed to be installed during the operation phase for power supply and hence the noise pollution load will be increase. However, the generators sets will be provided with silent type (acoustic enclosures) so as to keep the noise level within the prescribed standards.

Noise management is largely an issue relevant to indoor environmental quality and guest comfort. It is, however, important to include noise management measures in the overall external design concept to prevent potential impacts on nearby human and environmental receptors.

The significance of potential impacts to noise during operation phase is assessed in the table below.

Impact	There are no significant sources of noise associated with the operational phase of the proposed project. There may be minor noise from operation of power generator.	
Dimension	Rating	Description

Nature	Negative	Potential impacts to noise would be considered to be adverse (negative).
Type	Direct	Potential impacts would likely be direct impacts through the noise emission sources from project activities.
Duration	Long-term	Noise impacts are considered long-term throughout the project operation phase.
Extent	Local	Noise impacts would be limited to the project area and vicinity, and hence would be considered to be local.
Magnitude	Negligible	The additional noise from operation of project would not result in any change in the existing total ambient noise. Impact magnitude is considered negligible.
Receptor/Resource Sensitivity	Low	The representative NSR of fauna diversity is located away from the project approximately 1 km, the receptor/resource sensitivity is rated as Low.
Significance	Not significant	The combination of a Low resource sensitivity and Negligible impact magnitude will result in an overall Not significant potential impact.

Mitigation Measures

- The generators sets will be provided with silent type (acoustic enclosures)
- Selecting equipment with lower sound power levels
- Installing silencers for fans
- Installing suitable mufflers on engine exhausts and compressor components
- Installing acoustic enclosures for equipment casing radiating noise
- Improving the acoustic performance of constructed buildings, apply sound insulation
- Installing acoustic barriers without gaps and with a continuous minimum surface density of 10 kg/min order to minimize the transmission of sound through the barrier. Barriers should be located as close to the source or to the receptor location to be effective

6.5. Surface Water Environment

6.5.1. Impact on Surface Water Environment during Construction Phase

(a) Sedimentation

Potential construction-induced impacts to surface water quality will be soil erosion and sedimentation resulting from excavation and grading activities necessary for the construction of infrastructure during rainy seasons. Drainage and seepage from construction waste dumping site will have potential to surface water pollution. Mobilization and transport of soil particles due to construction activities may result in sedimentation of surface drainage networks, which may result in impacts to the water quality in to the nearby seawater bodies via drains. This could result in localised impacts such as runoff and erosion of exposed

bare soil, slopes and earth, and release of cement materials into sea water bodies with storm water runoff.

Dredging of the lagoons are commonly carried out to place pylon footings for jetties or piers of main building. Dredging of harbours is also an activity proposed in most instances during the construction stage of a resort. Dredging of the inner lagoon, for harbour development alters the current movement through creation of rip currents and also causes greater sedimentation on the coral colonies during the process of dredging leading to coral death by suffocation. Dredging physically disturbs or removes the bottom substrate, deposits sediments on the substrate, suspends sediments in the water column, reduces light penetration, increases turbidity, changes circulation, reduces dissolved oxygen and increases nutrient levels in the water column. Dredging also results in the direct elimination of the benthic habitat in the dredged area and a reduction of associated demersal species. The magnitude of the physical impacts on the reef varies considerably depending on the method used for dredging.

Stormwater runoff will be drained to a common settlement tank to remove solids, before being discharged to a common drain. Potential impacts to surface water quality due to sedimentation are expected to be short-term and localised in nature, and can be controlled if runoff is adequately managed.

The significance of potential impacts to surface water due to sedimentation during the construction phase is assessed in the following table.

Impact	Potential for impacts to surface water due to sediment-laden runoff.	
Dimension	Rating	Description
Nature	Negative	Potential impacts to surface water would be considered to be adverse (negative).
Type	Direct	Impacts to surface water would be direct impacts from Project activities.
Duration	Long-term	The construction phase will last approximately 12 months. The duration of potential impacts is therefore long-term.
Extent	Local	Potential impacts would be limited to the project area and vicinity, and hence would be considered to be local.
Magnitude	Medium	Potential impacts to sea water quality in the project area from sedimentation/runoff are expected to be of Medium magnitude.
Receptor/ Resource Sensitivity	Medium	The generation of sediment laden run off will be transferred to the nearby seawater bodies, which will increase total suspended solids and turbidity in receiving waters. And dredging also results in the direct elimination of the benthic habitat in the dredged area and a reduction of associated coral species. Overall sensitivity is rated as Medium

Significance	Moderate	The combination of a Medium resource sensitivity and Medium impact magnitude will result in an overall Moderate potential impact.
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Mitigation Measures

The following measures will be put in place for the project during the construction phase:

- Install silt trap to treat surface run-off from bunded areas prior to discharge to the stormwater system;
- Exposed soil surfaces should be protected by paving or fill material as soon as possible to reduce the potential of soil erosion and subsequent sedimentation;
- Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms;
- Provision of channels, earth bunds or sand bag barriers on site to direct stormwater to silt removal facilities;
- Provide measures to reduce the ingress of site drainage into excavations. If trenches have to be excavated during the wet season, excavate and backfill them in short sections wherever practicable. Discharge any water pumped out from trenches or foundation excavations into storm drains via silt removal facilities;
- Provide measures to prevent the washing away of construction materials, soil, silt or debris into any drainage system of open stockpiles of construction materials;
- Surface run-off from bunded areas should pass through oil/water separators prior to discharge to the stormwater system.
- Wherever possible, extend the jetties to the deep lagoon, such that near shore dredging will not be required.
- Where dredging is required, silt screens shall be used to retain the fine sediment and to reduce the impact on the marine environment.
- Use bund walls to reduce the impact of sedimentation from dredging activities.

(b) Construction and Domestic Wastes

The solid waste generated during construction will include steel pipes, steel plates, structural steel, wooden crates and domestic solid waste from the construction workers. In addition, there will also be biomass waste associated with the clearance of trees, shrubs and grass.

Small vessel and speed boats can leak fuel oil during transportation of construction materials and workers during construction phase. Moreover, lubricants and grease from construction machineries can also leak during construction phase.

Improper disposal of domestic waste, construction waste and hazardous waste such as waste oil and paints can have serious implications on the environment. Significant impacts associated with waste disposal include reduced aesthetic beauty of the surrounding beaches and the reef environment, marine pollution, water quality deterioration, increased sedimentation, increased turbidity as well as changes in the reef community structure. Construction material and waste if disposed into the marine environment will become a tremendous task to cleanup and will take long after operation of the resort for the reef to recover.

A small amount of domestic waste will be generated from construction workforce (about 100 workers). The establishment of labour camps will also effect on environment through improper waste (solid & garbage /sewage) disposal. A man can produce 0.4 kg per day of solid waste and the total waste produced from construction workers will be as follow:

$$\begin{aligned}\text{Total Domestic Waste Produced during Construction Phase} &= 100 \times 0.4 \text{ kg} \\ &= 40 \text{ kg / day} \\ &= 0.04 \text{ ton/day}\end{aligned}$$

A large workforce is often temporarily accommodated on the island during the construction stage, and if raw sewage runs into the marine environment, lagoon environment gets contaminated with increases in faecal coliform bacteria, eutrophication and water pollution problems. Disposal of sewage can also lead to increase in the nutrient level of the water and result in growth of seagrass patches. The sewage generated onsite will be collected through underground pipes into a holding tank, from where the sewage will be routed to an onsite septic tank.

The significance of potential impacts to surface water due to construction and domestic wastes during the construction phase is assessed in the following table.

Impact	Potential impact for surface water contamination from inappropriate waste management.	
Dimension	Rating	Description
Nature	Negative	Potential impacts to surface water would be considered to be adverse (negative).
Type	Direct	Impacts to surface water would be direct impacts from project activities.

Duration	Long-term	The construction phase will last approximately 12 months. The duration of potential impacts is therefore long-term.
Extent	Local	Potential impacts would be limited to the project area and nearby marine environment.
Magnitude	Small	Potential impacts to surface water quality in project area due to inappropriate waste disposal are expected to be of Small magnitude.
Receptor/ Resource Sensitivity	Medium	Significant impacts associated with waste disposal include reduced aesthetic beauty of the surrounding beaches and the reef environment, marine pollution, water quality deterioration, increased sedimentation, increased turbidity as well as changes in the reef community structure. Overall sensitivity is rated as Medium
Significance	Low/Moderate	The combination of a Medium resource sensitivity and Small impact magnitude will result in an overall Low/Moderate potential impact.

Mitigation Measures

The following measures will be put in place for the project during the construction phase:

- The contractor shall put in place a waste management plan aimed at minimizing the production of all wastes, which may lead to disposal of the surplus materials at the end of the construction period;
- Construction waste or domestic waste during construction process should not be dumped into the marine environment.
- All the waste from construction shall be separated categorically and stored for future waste management practices.
- Domestic waste such as food items and leaf litter should be composted in designated areas to enhance future gardening and landscaping.
- Non-recyclable materials will be stored in plastic bins, collected and disposed of through the municipal waste system.
- Potentially hazardous wastes shall be stored separately, i.e., hydrocarbon containers, used batteries.
- Segregate hazardous and non-hazardous waste and provide appropriate containers for the type of waste type (e.g. enclosed bins for putrescible materials to avoid attracting pests and vermin and to minimise odour nuisance);
- Sanitary toilet systems with septic tanks should be laid out prior to initiation of all massconstruction activities.

6.5.2. Impact on Surface Water Environment during Operation Phase

The most significant wastewater flow generated by proposed project is domestic sewage from bathing and toilet flushing, but important streams are also produced by the laundry and dry-cleaning, housekeeping, maintenance, and kitchen departments. These streams may include cleaning agents, disinfectants, and linen washing agents, including liquid bleach and ionic and nonionic detergents, which may release excessive phosphates and cause eutrophication of natural waterways. Effluents from kitchens may contain oils and grease. There are significant impacts related to disposal of untreated sewage and wastewater effluent, which may affect lagoon water or sea water quality. The proposed resort should be planned to use proper wastewater drainage systems and water efficient equipment should be used in the laundry department and kitchen. The wastewater treatment systems are planned to install for treating grey water from kitchen and black water from the toilet. After the wastewater is treated, the water released from the treated system should be reused in toilets, gardening, spraying ground.

The significance of potential impacts to surface water due to untreated sewage and wastewater effluent during the operation phase is assessed in the following table.

Impact	Potential impact for surface water contamination due to untreated sewage and wastewater effluent.	
Dimension	Rating	Description
Nature	Negative	Potential impacts to surface water would be considered to be adverse (negative).
Type	Direct	Impacts to surface water would be direct impacts from project activities.
Duration	Long-term	Potential impacts are considered long-term throughout the project operation phase.
Extent	Local	Potential impacts would be limited to the project area and nearby marine environment.
Magnitude	Medium	Potential impact for surface water contamination due to untreated sewage and wastewater effluent are expected to be of Medium magnitude.
Receptor/ Resource Sensitivity	Medium	Significant impacts may affect lagoon water or sea water quality associated with untreated sewage and wastewater effluent has excessive levels of harmful bacteria such as E-Coliform and also have high levels of nutrients such as nitrogen and phosphorus. Overall sensitivity is rated as Medium
Significance	Moderate	The combination of a Medium resource sensitivity and Medium impact magnitude will result in an overall Moderate potential impact.

Mitigation Measures

The following measures will be put in place for the project during the operation phase:

- In order to avoid any contamination of the aquifer and the lagoon with nutrients, organic material and pathogens; as well as to ensure highest recreational water quality, all sewage and wastewater resulting from operation shall preferably be treated in a Biological (Biofiltration) Wastewater Treatment Plant installed on the resort.
- Kitchens, laundry and restaurants shall be equipped with grease traps to enhance wastewater treatment process. The sanitary sewer should then be treated prior to discharge or reuse as grey water.
- Implement adequate sanitary facilities for onsite personnel.
- Design drainage pipes and culverts for the controlled release of storm flows.
- The sewage from the entire plant area will be collected and treated in a sewage treatment plant (STP). No untreated sewage will be directly discharged into the lagoon and sea near the site, or disposed of on land, for the duration of the project life cycle.
- The stormwater drainage system will be periodically inspected for blockages and cleaned at least once before the monsoon season each year; and
- Liquid effluents arising from operations will be treated to the applicable MEQG guideline prior to discharge.

6.6 Soils and Groundwater

6.6.1. Impact of Soil and Groundwater Environment during Construction Phase

During construction phase, the following potential soil and groundwater impacts are anticipated: Soil and groundwater contamination due to improper construction and domestic wastes soil and groundwater contamination due to potential leaks, spills and contaminated fill materials during all phases of project construction.

Construction debris such as packing materials and domestic wastes from construction workers will produceduring construction phase,. There will have potential to soil contamination and ground water pollution if these solid wastes are not properly disposed. Moreover, seepage and drainage from construction waste dump site will also impact on soil and ground water qualities.

The significance of potential impacts to soil and ground water due to construction and domestic wastes during the construction phase is assessed in the following table.

Impact	Potential impact for soil and ground water contamination from inappropriate waste management.	
Dimension	Rating	Description
Nature	Negative	Potential impacts to soil and ground water would be considered to be adverse (negative).
Type	Direct	Impacts to surface water would be direct impacts from project activities.
Duration	Long-term	The construction phase will last approximately 12 months. The duration of potential impacts is therefore long-term.
Extent	Local	Potential impacts would be limited to the project area and nearby marine environment.
Magnitude	Small	Potential impacts to soil and ground water quality in project area due to inappropriate waste disposal are expected to be of Small magnitude.
Receptor/ Resource Sensitivity	Medium	Significant impacts associated with waste disposal include reduced aesthetic beauty of the surrounding beaches and the reef environment, soil and ground water quality deterioration, increased sedimentation, increased turbidity as well as changes in the reef community structure. Overall sensitivity is rated as Medium
Significance	Low/Moderate	The combination of a Medium resource sensitivity and Small impact magnitude will result in an overall Low/Moderate potential impact.

Mitigation Measures

It is noted that soil and groundwater contamination due to improper Construction and Domestic Wastes would be the result of contaminated surface water runoff being discharged from waste storage and disposal areas. The production and discharge of this contaminated surface water

is assessed extensively within **Section 6.5**. It is considered that this impact has therefore already been covered to soil and groundwater. This is also the case with the impacts due to improper discharge of waste water and runoff which if direct to either a surface water, groundwater or soil receptor would all be subject to similar impacts and thus mitigation measures. In addition, recommended methods to prevent and control damage to soil and ground water are following;

- periodically checking equipment and machinery for leaks
- placing drip pans underneath equipment to collect hydrocarbon leaks or unavoidable motor oil drips
- implementing a Waste Management Plan to prevent spillages of wastes
- constructing bunds around fuel storage areas to contain 110% of the maximum capacity of the largest storage tank or container of hydrocarbons or waste fuel
- implementing a Spill Prevention Plan

- placing smaller fuel, oil and/or lubricant containers within secondary containment systems
- maintaining equipment to minimise or eliminate fuel and oil leaks.

6.6.2. Impact of Soil and Groundwater Environment during Operation Phase

During operation, Soil and groundwater contamination due to improper solid waste storage and disposal of proposed resort.

The following solid and liquid wastes will have potential to soil and groundwater pollutions if they are not properly managed. Major solid wastes will be generated from daily room cleaning, kitchen, bar, restaurant, cafeteria, souvenir desk, reception/office and staff quarters. Different kinds of solid wastes, such as tissue paper, food residues (organic wastes), glasses, tins, bottles, packing materials, stationeries, damaged/expired devices or appliances and other miscellaneous will be generated every day. Food wastes can generate offensive odor and make the people unpleasant and finally can affect to the health of employees and guests.

The significance of potential impacts to soil and ground water due to improper solid waste storage and disposal during the operation phase is assessed in the following table.

Impact	Potential impact for soil and ground water contamination from inappropriate waste management.	
Dimension	Rating	Description
Nature	Negative	Potential impacts to soil and ground water would be considered to be adverse (negative).
Type	Direct	Impacts to surface water would be direct impacts from project activities.
Duration	Long-term	Potential impacts are considered long-term throughout the project operation phase.
Extent	Local	Potential impacts would be limited to the project area and nearby marine environment.
Magnitude	Small	Potential impacts to soil and ground water quality in project area due to inappropriate waste disposal are expected to be of Small magnitude.
Receptor/ Resource Sensitivity	Medium	Significant impacts associated with waste disposal include reduced aesthetic beauty of the surrounding beaches and the reef environment, soil and ground water quality deterioration, increased sedimentation, increased turbidity as well as changes in the reef community structure. Overall sensitivity is rated as Medium
Significance	Low/Moderate	The combination of a Medium resource sensitivity and Small impact magnitude will result in an overall Low/Moderate potential impact.

Mitigation Measures

It is noted that soil and groundwater contamination due to improper Construction and Domestic Wastes would be the result of contaminated surface water runoff being discharged from waste storage and disposal areas. The production and discharge of this contaminated surface water

is assessed extensively within **Section 6.5**. It is considered that this impact has therefore already been covered to soil and groundwater. This is also the case with the impacts due to improper discharge of waste water and runoff which if direct to either a surface water, groundwater or soil receptor would all be subject to similar impacts and thus mitigation measures. In addition, recommended methods to prevent and control damage to soil and ground water are following;

- Avoiding use of polystyrene foam in all operations;
- Providing in-room recycling procedures and appropriate receptacles;
- Use of glass or durable plastic instead of disposable plastic items (e.g. straws, cups);
- Implementing organic-waste composting;
- Disposing of wastes only after all waste prevention and recycling strategies have been explored and maximized;
- Implementing a Waste Management Plan to prevent spillages of wastes

6.7. Biodiversity Environment

The proposed project area, BoWei Island is considered to be affected directly or indirectly on both flora and fauna diversity during the processes such as in site preparation, exploration and hotel resort closure. The impacts are investigated during these processes such as habitat damage and change, fragmentation and loss, species disturbance and loss. Cumulative impacts can affect biodiversity and ecosystem services in many ways, from site to landscape level. The impact level on existing flora and fauna was investigated as moderate. The extent of the impact on fauna and flora is investigated as only in the site specific and the duration of the impact is assumed as long term.

6.7.1. Impacts on Biodiversity Environment during Construction Phase

Impacts to biodiversity have been evaluated in the context of the Project Facilities fully described in Chapter 5, including details of planned construction and operation activities. Anticipated Impacts on biodiversity environment during pre-construction and construction phase will be as follows:

(a) Impacts on Flora Diversity

In construction phase, Site and habitat clearance and construction of the new roads, lighting and noise will disturb the animal behavior and movement and loss of the plant species which might be impacted in moderate level. Generation of dust, lighting and noise will disturb the animal behavior and movement,

- Damage and removal of existing vegetation will loss the habitats
- Land contamination will disturb the vegetation.

(b) Impacts on Fauna Diversity

Clearing away trees and natural vegetation can cause hazards to the habitats of birds and butterflies. Noise due to construction activities at the site involving human and vehicular movement will disturb aril and wild animals in the area. If waste disposal are not properly done, there will be increased in the habitat loss of native species. Terrestrial micro flora at the site are also affected. The construction of solid jetties and piers restrict seawater circulation, and obstruct sand movement around the island. The physical changes from jetty construction result in changes to the biological life around the concrete structures. The diversity of fish is changed considerably and only certain species of fish are found near these structures.

Significant of Impacts on Biodiversity Environment

Significant points were anticipated based on the presence of flora and fauna status in and around the project area. The points are assumed with the respective measuring factors in the left column of the following table. According to the analysis, the points are non-significant affected on flora and fauna as shown in the following table.

Table -Significant Points in the Respective Flora and Fauna Groups through Measuring Factors

Factors affected on biodiversity	M	S	ST	Amphibians & Reptiles	Fishes	Birds	Small mammal	Zooplan- kton
Area of influence	1-25%	1-25%	1-25%	1-25%	1-25%	1-25%	1-25%	1-25%
percentage of resource affected	1-30%	1-25%	1-25%	1-25%	1-25%	1-25%	1-25%	1-25%
sensitivity of resources	1-25%	1-25%	1-25%	1-25%	1-25%	1-30%	1-30%	1-25%

status of resources	important	normal						
regulatory status	normal	normal	normal	normal	normal	normal	normal	normal
Social value	normal	normal	normal	normal	normal	normal	normal	normal

Notes: M=Mangrove vegetation, S=Shrub vegetation, ST= Scatter trees, A&R=Amphibian and reptiles,

Significant points

Low=1-25%, Moderate= 26-50%, High= 51-75%, Very High=>76%

During the construction period these species might get disturbed, however, this situation will be for a very shorter period of time and multilayered peripheral greenbelt will provide an excellent habitat for these species once the project landscape becomes fully grown. Hence, no long term impact to this local avifauna is envisaged from this resort beach development.

So, impacts on biodiversity environment during construction phase will be low or Moderate as follows:

Impact	Potential impact on flora and fauna diversities from Construction of proposed project.	
Dimension	Rating	Description
Nature	Negative	The impact on the terrestrial and aquatic biodiversity is negative.
Type	Direct	Impacts on flora and fauna diversities would be direct impacts from project activities.
Duration	Long-term	Although construction is estimated to take 12 months, the loss/ conversion of habitats will be long term.
Extent	Local	Potential impacts would be limited to the project area and nearby marine environment.
Magnitude	Small	Potential impact on flora and fauna diversities in project area due to construction activities are expected to be of Small magnitude.
Receptor/ Resource Sensitivity	Medium	Given the large proportion of the area affected is covered by habitats with medium sensitivity.
Significance	Low/Moderate	The combination of a Medium resource sensitivity and Small impact magnitude will result in an overall Low/Moderate potential impact.

Mitigating Measures

Mitigation measures should be carried out during constructional phase as below:

- Avoid the over exploitation of forest products from natural forests.
- Restrictions on location of worker rest shelters and offices for project staff near the project area with vegetation to avoid human induced secondary additional impacts on the left over flora and fauna species of the surrounding areas.

- Cutting, uprooting, of trees or small trees present around the project site for cooking, burning or heating purposes by the laborers shall be prohibited and suitable alternatives for this purpose shall be made available.
- Maintain the plants and vegetation which existing around the project area will reduce in a natural way of the pollution in water and terrestrial environment.
- Growing the native tree species and create a green belt around the project area to control the air pollutants and natural balance of the environment.

6.7.2. Impacts on Biodiversity Environment during Operation Phase

The likely impacts of the proposed development during the operation phase include air and noise pollution and disturbance generated due to area lighting and human activities. This may affect the mammals and birds in the vicinity. Operational activities that have potential to disturb native fauna include the use of night lighting at infrastructure and facility locations. Lighting required for operation and safety at the facilities can influence nocturnal foraging behaviours as well as disrupt sleep patterns of crepuscular species.

The landscape development will consider the nativity of the species so that local faunal species are supported further.

Potential impacts on biodiversity environment during operation phase will be low or negligible as follows:

Impact	Potential impact on flora and fauna diversities from operation of proposed project.	
Dimension	Rating	Description
Nature	Negative	The impact on the terrestrial and aquatic biodiversity is negative.
Type	Direct	Impacts on flora and fauna diversities would be direct impacts from project activities.
Duration	Long-term	the loss/ conversion of habitats will be long term.
Extent	Local	Potential impacts would be limited to the project area and nearby marine environment.
Magnitude	Small	Potential impact on flora and fauna diversities in project area due to operation activities are expected to be of Small magnitude.
Receptor/ Resource Sensitivity	Low	Given the large proportion of the area affected is covered by habitats with low sensitivity.
Significance	Low	The combination of a Low resource sensitivity and Small impact magnitude will result in an overall Low potential impact.

Mitigating Measures

Mitigation measures should be carried out during operation phase as below:

- machinery such as generator and water pumps will be maintained in accordance with standard to minimise unnecessary noise generation;
- For areas requiring night-time lighting, lights will be used only where necessary and will be directed toward the subject area and away from habitat areas where possible;
- Hunting wild animals will be strictly prohibited to apply for all staff and visitors;
- Fishing and using of illegal fishing gear will be prohibited.
- Well waste and plastic management system (eg. no plastic to the water and land, no burning the rubbish which might be impacted negatively to the animals and human health) should be more emphasized and conducted not to be impacted on marine and terrestrial living things.
- During the development of the green belt within the project area, it will be emphasized that the plant species likely to be planted belong to the existing forest type .Existing trees will be included in the landscape plan of proposed project in order to maintain the existing biological environment of the area.

6.8. Resource Consumption

During construction phase, there will be no high resource consumption.

The following resources will be consumed during the operation of the proposed project.

6.8.1. Water Consumption

Operation of proposed resort, water consumption is related to personal use by guests and facility requirements for housekeeping, laundry, cooking, swimming pools, spa facilities, and grounds maintenance. Total water usage in proposed resort may range from less than 200 l/day per person to over 1200 l/day per person. Main building hotel and pool villas with full-service restaurant and on-site laundry facilities typically exhibit the highest water usage on a per room basis. Moreover, a can increase freshwater consumption by as much as 10 percent. Apart from seasonal aspects, the main factors influencing the amount of water used are the presence of swimming pool, sauna and steam bath facilities at resort. The water requirements are planned to be met through exiting tube well and if in case, ground water extraction is required. The project proposes to recycle treated wastewater for flushing, and landscaping thereby reducing the fresh water requirement.

The Project is not expected to have a significant impact on current water users (i.e. no residential area on the Island) and have negligible to low significant impact on ground water resource consumption.

The significance of potential impacts to water consumption during operation of project is assessed in the following table.

Impact	Potential impacts on increased water consumption from resort operation activities.	
Dimension	Rating	Description
Nature	Negative	Potential impacts to water consumption would be considered to be (Negative).
Type	Direct	Impacts to ground water would be direct impacts from resort activities.
Duration	Long-term	The impact is long-term because it happens during operation phase.
Extent	Local	Water use impacts from the project would be local to the project area
Magnitude	Negligible	The resort during full operation is approximately about (300,000 gallons) of water a year to negligible potential impact magnitude.
Receptor/ Resource Sensitivity	Low	There is no residential area on the island, the representative NSR of ground water resource consumption is low to moderate, and the overall receptor/resource sensitivity is rated as Low.
Significance	Not significant	The combination of a Low resource sensitivity and Negligible impact magnitude will result in an overall Not significant potential impact.

Mitigating Measures

Mitigation measures should be carried out during operation phase as below:

- Use by communities and /Rainwater collection practiced through a network of gutters and pipes, and channeled into a cistern or a catchment basin. Rainwater collected can be used for irrigation, for evaporative cooling equipment, and for replacing pool water lost through evaporation and normal use;
- Biological treatment should be used to enable reuse of grey water, which can be reused for irrigating grounds or other non-potable purposes. Grey water from bathrooms, sinks, and kitchens has limited toxicity, requiring minimal treatment, has good reuse potential, and can be easily separated into one stream. Wastewater streams used for this purpose should be carefully monitored to ensure that grey water is not mixed with other sewage resulting in potentially hazardous situations;
- Garden design and plant selections to enable irrigation water requirements to be met by rainwater and natural water percolation in soils;
- Water-saving equipment, including ultra-low-flush toilets, spray nozzles, urinals, faucet aerators, and low-flow showerheads, infrared and ultrasonic sensors, waterspigots, and pressure-control valves.

6.8.2. Power Consumption

Normally, hotel process will consume electrical power especially for air conditioner, hot water system, and lighting decoration. The estimated power load for the proposed project is approximately 200 KVA. The source of power for the resort will be supplied by 2 No. Diesel Generators of capacity 300KVA (including one DG set standby) on the islands considering energy consumption associated with lighting, heating, ventilation, and air conditioning (HVAC) systems. Impact significance for electricity can be rated as negligible electricity consumption and distribution because the proposed hotel will not use electricity from the national grid and will run by its own generator.

The significance of potential impacts to water consumption during operation of project is assessed in the following table.

Impact	Potential impacts on increased power consumption from resort operation activities.	
Dimension	Rating	Description
Nature	Neutral	Potential impacts to power consumption would be considered to be (Neutral).
Type	Direct	Impacts to power consumption would be direct impacts from resort activities.
Duration	Long-term	The impact is long-term because it happens during operation phase.
Extent	Local	Water use impacts from the project would be local to the project area
Magnitude	Negligible	The resort during full operation is approximately (200 KVA) of power conservation needed to negligible potential impact magnitude.
Receptor/ Resource Sensitivity	Low	The receptor/resource sensitivity is rated as negligible; the proposed hotel will not use electricity from the national grid and will run by its own generator.
Significance	Not significant	The combination of a Negligible resource sensitivity and Negligible impact magnitude will result in an overall Not significant potential impact.

Mitigating Measures

The following aspects of building design can all reduce energy use when correctly applied:

- Use of passive solar design to take advantage of natural sunlight and airflow;
- Optimized building orientation;
- Use of direct gain and day lighting techniques, allowing sunlight to penetrate a building to provide light to illuminate interiors and to provide heat;
- Implementation of Trombe walls (glazing-encased thin airspace in front of a thermally massive wall);

- Installation of a renewable energy systems where local conditions permit (e.g. solar water heating, photovoltaic cells, geothermal heat pumps, and use of biofuels).

Energy use of hotel building services may be reduced by the following methods:

Reduction of energy consumption associated with heating, ventilation, and air conditioning (HVAC) systems through:

- Specification of well insulated building fabric to minimize heat transfer
- Energy recovery of from exhaust to supply air in the building ventilation systems
- Variable air volume air handling systems;
- Use of inverter-driven variable speed fans;
- Adoption of temperature control settings which avoid simultaneous heating and cooling;

Reduction of energy consumption associated with lighting:

- Use of occupancy sensors
- Use of high-efficiency light bulbs (e.g. compact fluorescent light bulbs) where possible
- Daylight controls (e.g. to adjust interior lighting, based on incoming daylight, using a photoelectric sensor)
- Dimming-control retrofits for fluorescent, high-intensity discharge, and incandescent lamps
- Adoption of an energy management and control systems, including centralized monitoring and reporting of energy and water use, switched time schedules, chiller optimization, load-based reset, and demand control

Reduction of energy consumption associated with cooking and refrigeration equipment:

- Match use of cooking range burners to facility needs
- Use of appropriate lids
- Select high efficiency refrigerators and walk-in coolers;
- Use of an exhaust system that automatically varies fan speeds

6.9. Waste Management

During construction and operation, there are a range of activities which have the potential to generate a range of liquid and solid waste streams.

6.9.1. Construction Phase

During the construction phase, a range of solid waste materials will be generated either due to the daily activities of the construction workforce (e.g. generation of putrescible waste) as well as a range of general construction waste such as biomass, concrete, steel pipes, plastic

pipes, steel plates, structural steel and wooden crates during the civil works phase of construction. In addition, hazardous waste will be generated such as oil rags and paints.

These solid wastes, will apart from attracting stray animals and other rodents, but will also constitute a visual impact of untidiness that does not tally with the notion of improvement of quality of life expected of the proposed project. The potential impacts could include soil and groundwater impacts, human health impacts, impacts to surface water and indirect impacts to community health and safety due to contamination of drinking water or food. These impacts associated with improper storage are related directly to management of impacts to surface water soils and groundwater as discussed above Sections 6.5 and 6.6.

The significance of potential impacts to the capacity of the existing waste management network to deal with the solid waste and hazardous waste from the construction phase is assessed in the following table.

Impact	Impacts of solid and hazardous waste generation, storage and disposal upon the existing waste management infrastructure.	
Dimension	Rating	Description
Nature	Negative	Potential impacts to soil would be considered to be adverse (negative).
Type	Direct	Impacts to the existing waste management infrastructure would be direct.
Duration	Long-term	The construction phase will last approximately 12 months. Impacts from the Project could potentially last longer than this duration. The duration of impacts is therefore long-term.
Extent	Local	Potential impacts would likely be restricted to the local area.
Magnitude	Small	Potential impacts to soil quality in Project area due to inappropriate waste disposal is expected to be of Small magnitude.
Receptor/ Resource Sensitivity	Low	If the solid waste and hazardous waste is disposed offsite within their designated waste storage areas the resource sensitivity should be medium as the waste disposal will be confined to that area.
Significance	Minor	The combination of a Medium resource sensitivity and Small impact magnitude will result in an overall Minor impact.

Mitigating Measures

The following measures will be put in place for the Project during construction phase

- The contractor shall put in place a waste management plan aimed at minimizing the production of all wastes.

- Segregate hazardous and non-hazardous waste and provide appropriate containers for the type of waste type (e.g. enclosed bins for putrescible materials to avoid attracting pests and vermin and to minimise odour nuisance);
- Store wastes in closed containers away from direct sunlight, wind and rain;
- Store waste systematically to allow inspection between containers to monitor leaks or spills;
- Ensure that storage areas have impermeable floors and containment, of capacity to accommodate 110% of the volume of the largest waste container;
- Contractors employed to manage the waste should clearly identify within their bidding documents how the collected waste will be managed. All end points for collected waste are to be inspected and audited and noted to be developed such that all waste is able to be disposed of in an environmental responsible manner; and
- Monitoring of appointed waste contractors using chain-of custody documentation for the disposal of waste to ensure that it is able to be disposed of in an environmental responsible manner and in accordance with all prevailing regulations.

6.9.2. Operation Phase

During the operation phase waste generated by resort facilities normally includes paper and cardboard items, glass and aluminum products, plastic items, organic waste, building materials and furniture, and used oils and fats. Hazardous wastes may include batteries, solvents, paints, antifouling agents, and some packaging wastes. The solid waste generation for 131 rooms and restaurants will be within 800 kg per day at the peak of operations. Of this waste generated, will include 80% to 90% organic matter (mostly food waste, garden trash and packaging material), and the rest inorganic material such as glass, and metal.

Impact	Impacts of solid and hazardous waste generation, storage and disposal upon the existing waste management infrastructure.	
Dimension	Rating	Description
Nature	Negative	Potential impacts to soil would be considered to be adverse (negative).
Type	Direct	Impacts to the existing waste management infrastructure would be direct.
Duration	Long-term	The impact is long-term because it happens during operation phase.
Extent	Local	Potential impacts would likely be restricted to the local area.
Magnitude	Small	Potential impacts to soil quality in project area due to inappropriate waste disposal is expected to be of Small

		magnitude.
Receptor/ Resource Sensitivity	Low	If the solid waste and hazardous waste is disposed offsite within their designated waste storage areas the resource sensitivity should be medium as the waste disposal will be confined to that area.
Significance	Minor	The combination of a Medium resource sensitivity and Small impact magnitude will result in an overall Minor impact.

The following measures will be put in place for the project during operation phase:

- A waste management plan is to be developed which includes specific requirements to manage, avoid, reduce and reuse waste during the operation phase for all of the waste streams identified;
- Waste disposal facilities shall be sited and signposted throughout the site;
- Provide training to workers for waste disposal in designated areas and use of sanitation facilities;
- Segregate hazardous and non-hazardous waste and provide appropriate containers for the type of waste type (e.g. enclosed bins for putrescible materials to avoid attracting pests and vermin and to minimise odour nuisance);
- Store wastes in closed containers away from direct sunlight, wind and rain;
- Store waste systematically to allow inspection between containers to monitor leaks or spills;
- Ensure that storage areas have impermeable floors and containment, of capacity to accommodate 110% of the volume of the largest waste container
- Waste clean-up measures are to be undertaken on at least a fortnightly basis to collect any waste or unused materials from the Project site. All waste collected should be managed and disposed of in accordance with the required regulations;
- Monitoring of appointed waste contractors using chain-of custody documentation for the disposal of waste to ensure that it is able to be disposed of in an environmental responsible manner and in accordance with all prevailing regulations.

The following principles of waste reduction in tourism and hospitality facilities should also be considered as part of a formal Waste Management Plan:

- Buying in bulk quantities whenever possible;
- Use of refillable, bulk dispensers (e.g. toiletries) rather than individually packaged products;
- Working with suppliers to limit use of, and establish recycling for, product packaging;
- Avoiding use of polystyrene foam in all operations;
- Providing in-room recycling procedures and appropriate receptacles;

- Use of glass or durable plastic instead of disposable plastic items (e.g. straws, cups);
- Implementing organic-waste composting;
- Disposing of wastes only after all waste prevention and recycling strategies have been explored and maximized.

6.10. Socio-Economic Environment

Social Impact Assessment involves the processes of analyzing, monitoring and managing the intended and unintended social consequences both positive and negative of planned interventions and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment. This section discusses the proposed development, project activities and the extent of potential impacts anticipated from the proposed resort development.

In this instance, there are no existing settlements or the villagers located within 10 kilometers radius of the project study area. However, the impact assessment identified focusing base on Kawthong Township, 52 kilometers away of project area.

Economy and Livelihoods

The proposed project will have a positive effect in creation of job opportunities for the people in the project area. During construction phase, the proposed project will provide about 100 temporary employment opportunities for local people. It is anticipated that approximately 95 direct employment opportunities will be created during the operation phase. There will be a need for employing technical, nontechnical, administrative and support staff during this phase, for which due preference will be given to the locals based on their skill sets. In addition, the project will require goods and services throughout its lifecycle. There are opportunities for local businesses to provide these goods and services (e.g. trips & tours, construction equipment, food suppliers). As a result, existing local businesses may expand or new businesses may be established locally to meet these demands – providing employment opportunities. This is referred to as indirect employment. The improvement in the physical infrastructure and land use change will lead to significant appreciation of the land value. Scope will be widened for other investors and developers also to invest in the area.

Increased employment will improve household income levels and livelihood of local people. According to the secondary data collections, there is significant number of unemployment in Kawthong Region as follow:

Workforce	Employed	Unemployed	Unemployment rate
89733	65804	23929	26.67%

Moreover, according to the primary data collection, most of the workable aged people are relied on fishing and young people are going to Boarder City (Thialand) for jobs. So, long-term job opportunities in native town will be great benefit to local people, especially for local women in getting involved in such jobs. Job opportunities will provide an alternative livelihood to people in the project area other than going to Thailand (Boarder City) for jobs.

The resulting impacts such as increase in employment opportunities, increase in income for local employed by the resort were assessed as a positive beneficial to the local people.

The impact significance on economy and livelihoods during construction is provided in the following table

Impact	Impacts to Economy and Livelihoods	
Dimension	Rating	Description
Nature	Positive	An increase in employment opportunities and demand for goods and services are positive. The project proponent is committed to capitalizing on local content opportunities.
Type	Direct	It directly impacts local people.
Duration	Short-term	The impact is short-term because it occurs during the construction phase.
Extent	Regional	The project will provide employment opportunities for local people in Kawthoung and possibly villages from within the surrounding areas. Therefore, the impact is regional.
Scale	Small	The impact scale is small.
Magnitude	Positive	The impact is positive

The impact significance on economy and livelihoods during operation is provided in the following table

Impact	Impacts to Economy and Livelihoods	
Dimension	Rating	Description
Nature	Positive	An increase in employment opportunities and demand for goods and services are positive. The project proponent is committed to capitalizing on local content opportunities.
Type	Direct	It directly impacts local people.
Duration	Long-term	The impact is long-term because it happens during operation phase.
Extent	Regional	The project will provide employment opportunities for local people in Kawthoung and possibly villages from within the surrounding areas. Therefore, the impact is regional.
Scale	Small	The impact scale is small.

Magnitude	Positive	The impact is positive
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Mitigating Measures

The following measures will be put in place for the potential project benefits and manage

- Whenever necessary, collaboration between project authority and local bodies will be done on regular basis with an objective to build and maintain a good relationship which is necessary for smooth functioning of the project as well as progress and welfare of the people in the study area.
- Develop and implement a local content plan. The plan should establish measures to facilitate local recruitment and procurement. This should include targets so that performance can be tracked and evaluated. Development of the plan should involve consultation with relevant stakeholders, including government authorities and local villagers;
- Review opportunities to establish a skills training program with an aim of training interested local villagers to contribute to the project, including the operation phase. This should include a skills audit to determine what skills will be required by the project and what skills are available within the local villagers. This will need to be undertaken as early as possible so that a training program can be developed and implemented and villagers are able to meaningfully contribute to the project;

6.11. Potential Impacts on Guests and Workers

Occupational health and safety issues associated with the proposed resort during operations potentially affecting facility workers and, where noted, facility guests primarily include the following:

1. Noise
2. Physical hazards
3. Biological / Chemical hazards
4. Swimming pool safety
5. Fire safety

(1) Noise

Workers and guests may be subject to noise, including from the kitchen, laundry, housekeeping, and other guest rooms. In the case of the workforce, repetitive exposure over long periods may impact hearing. For guests, unnecessary noise in public areas and rooms is a nuisance. Noise management measures should be developed to a significant extent during the design and construction stages of hotel development.

Mitigation Measure

Recommended control techniques to reduce indoor and outdoor noise pollution include:

- Installing double doors between guest rooms and between rooms and noisy environments (e.g. kitchens, laundries);
- Installing windows with sound-reduction materials;
- Positioning, enclosing, and isolating noisy equipment (e.g. permitting space or buffer zones encompassing two walls between the laundry and public areas).

(2) Physical Hazards

Slips and Falls

Facility guests and workers may also be susceptible to slip and fall accidents in hotel room showers or common areas (e.g. lobbies, restaurants, and recreational areas).

Mitigation Measure

Recommended prevention and management methods include the following:

- Equipping shower stalls with nonslip surfaces or antislip strips, secure handles, and ready access to emergency phones;
- Installing nonslip surfaces in areas with potentially slippery floors or subject to frequent wetting (e.g. open hallways or swimming pool decks);
- Maintaining frequently transited areas as dry as possible;
- Placing of temporary or permanent warning signs on wet floors during cleaning or after rain.

(3) Biological / Chemical Hazards

Water and Food Quality

Food and water provided to workers and guests should be safe.

Mitigation Measure

The following food hygiene measures should be adopted:

- Compliance with food hygiene and water-quality standards defined by central authorities or, in their absence, application of international food-handling, preparation and storage and water-quality recommendations;
- Supply of safe potable water for drinking, bathing, food preparation, and other purposes where it may be ingested;
- Regular testing of potable water according to World Health Organization (WHO) standards as a minimum.

Indoor Air Quality

Indoor air quality is the quality of air inside buildings, as represented by concentrations of pollutants and thermal conditions that affect the health, comfort, and performance of hotel occupants and employees. Providing good indoor air quality is critical to asthma and allergy prevention and the prevention of other health effects and discomfort situations, such as headaches and nausea. Typical indoor air-quality contaminants may include ammonia (from cleaning products), VOCs (from use of interior products, such as solvents, paints, adhesives, dry cleaning, and cosmetics), odors, dust, formaldehyde (from fabrics, insulation, furniture, and cigarette smoking), carbon dioxide and nitrogen oxides, and bacteria and fungi (mold and mildew from carpets, HVAC filters).

Respiratory irritation from breathing fumes (e.g. chlorine, hypochlorite, ammonia, and sulfur dioxide) may present potential health impacts for laundry department workers.

Mitigation Measure

The following control techniques are recommended for contaminant sources associated with housekeeping and maintenance (e.g. cleaning products, waxes and polishes, air fresheners, drain cleaners, solvents, pesticides, lubricants, paints, and coatings, as well as those applicable to technical standards of building, such as construction adhesives, carpet–carpet adhesives, insulation, vinyl–plastic floor coverings and wall coverings, and asbestos products):

- Use low-VOC-emitting products (e.g. water-base paints rather than oil based paints, low VOC containing adhesives for flooring and wall decorations);
- Avoid aerosols and sprays;
- Use housekeeping and cleaning products during unoccupied hours taking care to follow safety precautions including appropriate ventilation;
- Avoid the use of “air fresheners”;

- Expose products in open or ventilated areas before installation and increase ventilation rates during and after installation.

For contaminant sources associated with guest rooms [e.g. tobacco products, cooking, tracked-in dirt or pollen, and personal products (perfumes, hairsprays, or deodorants)], recommended control techniques include the following:

- Institute a no-smoking policy;
- Use exhausts ventilation with pressure control for major local sources;
- Avoid paper clutter;
- Provide specific staff-training and guest information.

For contaminant sources associated with the HVAC system (e.g. contaminated filters, contaminated duct lining, dirty drain pans, humidifiers, refrigerants, and mechanical rooms), recommended control techniques include the following:

- Implement a program of periodic preventive maintenance, including cleaning drain pans and changing filters;
- Keep duct lining dry;
- Maintain clean mechanical rooms;
- Rapidly fix leaks and clean spills.

Use of Chemical Cleaners

Occupational dermatitis from chemical cleaners is one of the main occupational hazards for housekeeping and laundry workers.

Mitigation Measure

Prevention measures are focused on using nontoxic, hypoallergenic cleaning products and limiting skin exposure through the use of gloves and other personal protection equipment.

Exposure to pesticides

Potential exposures to pesticides include dermal contact (e.g. in storage rooms or from leaking containers) and inhalation during their preparation, storage, and application. The effect of such impacts may be increased by climatic conditions, such as wind, which may increase the chance of unintended drift, or high temperatures, which may be a deterrent to the use of personal protective equipment (PPE) by the operator.

Recommendations for the management of chemical hazards related to pesticides include the following:

- Train personnel to apply pesticides and ensure that personnel have received the necessary certifications or equivalent training where such certifications are not required;
- Respect post-treatment intervals to avoid operator exposure during reentry to crops with residues of pesticides;
- Ensure hygiene practices are followed (in accordance to FAO and PMP) to avoid exposure of family members to pesticides residues.

(4) Swimming Pool Safety

Environmental issues related to the operation of swimming pools include water consumption and energy use for heating, and have been described in previous sections of this document.

Additional swimming pool issues are related to the health and safety of workers and guests and include water sanitization and drowning hazards.

Mitigation Measure

Recommended health and safety management methods include

- Design of swimming pool depths and configuration to reduce or avoid the risk of injuries or drowning, including posting of depth warning information;
- Institution of lifeguard supervision policies;
- Implementation of a pool water sanitization program to prevent the growth of microorganisms that can cause stomach upset, diarrhea, and infections in the ear, nose, and throat. Bacterial control may be achieved by adding a sanitizer (usually chlorine based, such as sodium and calcium hypochlorite, and chlorinated isocyanurates although ozone and UV-based systems are also becoming common), a flocculant to help mass together particulates and bacteria in the water, and filtration to remove it. The pool water sanitation program should include monitoring of water quality to establish treatment need and frequency.

(5) Fire Safety

Fire presents a safety risk to hotel workers and guests alike.

Mitigation Measure

The nature and extent of life and fire safety systems required will depend on the building type, structure, construction, occupancy, and exposures. Project proponent should prepare a Life and Fire Safety Master Plan identifying major fire risks, applicable codes, standards and regulations, and mitigation measures. The Master Plan should be prepared by a suitably qualified professional, and adequately cover, but not be limited to, the issues addressed

briefly in the following points. The suitably qualified professional selected to prepare the Master Plan is responsible for a detailed treatment of the following illustrative, and all other required, issues.

Fire Prevention

Fire prevention addresses the identification of fire risks and ignition sources, and measures needed to limit fast fire and smoke development. These issues include:

- Fuel load and control of combustibles
- Ignition sources
- Interior finish flame spread characteristics
- Interior finish smoke production characteristics
- Human acts, and housekeeping and maintenance

Means of Egress

Means of Egress includes all design measures that facilitate a safe evacuation by residents and/or occupants in case of fire or other emergency, such as:

- Clear, unimpeded escape routes
- Accessibility to the impaired/handicapped
- Marking and signing
- Emergency lighting

Detection and Alarm Systems

These systems encompass all measures, including communication and public address systems needed to detect a fire and alert:

- Building staff
- Emergency response teams
- Occupants
- Civil defense

Compartmentation

Compartmentation involves all measures to prevent or slow the spread of fire and smoke, including:

- Separations
- Fire walls
- Floors
- Doors
- Dampers

- Smoke control systems

Fire Suppression and Control

Fire suppression and control includes all automatic and manual fire protection installations, such as:

- Automatic sprinkler systems
- Manual portable extinguishers
- Fire hose reels

Emergency Response Plan

An Emergency Response Plan is a set of scenario-based procedures to assist staff and emergency response teams during real life emergency and training exercises. The Fire and Life Safety Master Plan should include an assessment of local fire prevention and suppression capabilities.

Operation and Maintenance

Operation and Maintenance involves preparing schedules for mandatory regular maintenance and testing of life and fire safety features to ensure that mechanical, electrical, and civil structures and systems are at all times in conformance with life and fire safety design criteria and required operational readiness.

6.12. Cultural Heritage Impact Assessment

There are no historical or archeological monuments of significance within 10 kilometers radius of the project and hence no negative impact in this regard is anticipated.

7. CUMMULATIVE IMPACTS ASSESSMENT AND MITIGATION MEASURES

7.1. Methodology and Approach

Cumulative Impact Assessment is the process of assessing potential effects on receptors from environmental and social impacts caused by the combined influence of more than one project. Impacts directly associated with the Project are discussed in the preceding sections. In this section the impacts associated with cumulative effects of the Project and other development are described. Evaluation of potential cumulative impacts is an integral element of an impact assessment. In reference to the scope for an impact assessment, IFC's Performance Standards specify that:

“Risks and impacts will be analyzed in the context of the project’s area of influence. This area of influenceen compasses...areas potentially impacted by cumulative impacts from further planned development of the project, any existing projector condition, and other project-related developments that are realistically defined at the time the Socialand Environmental Assessmentis undertaken; and (iv) areas potentially affected by impacts from unplanned but predictable developments caused by the project that may occur later or at a different location. “(IFC 2006).

Cumulative impacts inrelationto anactivity aredefined inthe EIA Regulations (Government Notice R543) as meaning “the impact of an activity that in itself may not be significant, but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area”

7.2. Anticipated Cumulative Impacts

So, cumulative impacts will be considered as follow:

Increase water consumption, water contamination and waste generation may cumulate from the construction of other similar projects will stand as cumulative impacts. Traffic congestion will also be considered as cumulative impacts.

Compound Cumulative Impacts

Air emission, water and energy conservation, noise and waste generation from tourist facilities include products of combustion, domestic grey water and black water from bathing and toilet flushing, consuming large amounts of energy in the form of heat energy may cumulative due to the 127 guest rooms for 150 guests and those nearby.

Mitigation Measures

One suggestion is to develop Bo Weiisland resortmanagement and development committee (under Tanintharyi Region Tourism Management Organization) for a focal point of Hotels and Tourism services at the Kawthoung Area. This committee will take responsible for the inspection of hotels in conformity with the Myanmar Hotels and Tourisms Law, to reduce the cumulative impacts on physical resources such as water and energy consumption, air pollution, noise pollution and waste generation. Otherwise, Kawthoung Hotel Business Association should take care of this case. Often, public talks and meetings should be arranged in order to accrue knowledge for people regarding environmentally friendly best practices.

8. ENVIRONMENTAL MANAGEMENT PLAN (EMP)

In order to manage the physical, biological and sociological impacts identified in the impact assessment, Century Bright Gold Co., Ltd. (CBG) has committed to implement an environmental management plan of the project (EMP). This management plan will form the basis for the development of an integrated management system for environmental and community issues. EMP is a site-specific plan developed to ensure that the project is implemented in an environmentally sustainable manner where all contractors and subcontractors, including consultants, understand the potential environmental impacts arising from the proposed project and take appropriate actions to properly manage that risk. EMP also ensures the project implementation is carried out in accordance with the design by taking appropriate mitigation actions to reduce adverse environmental impacts during its life cycle. EMP for proposed project will include the following essential parts.

- (a) Environmental Management and Monitoring Plan,
- (b) Natural Disaster Response Plan, and
- (c) Corporate Social Responsibility (CSR) Program.

8.1. Environmental Management and Monitoring Team

The purpose of environmental monitoring is to evaluate the effectiveness of implementation of Environmental Management Plan (EMP) by periodically monitoring the important environmental parameters within the impact area, so that any adverse effects are detected and timely action can be taken. Main objectives of environment monitoring plan include:

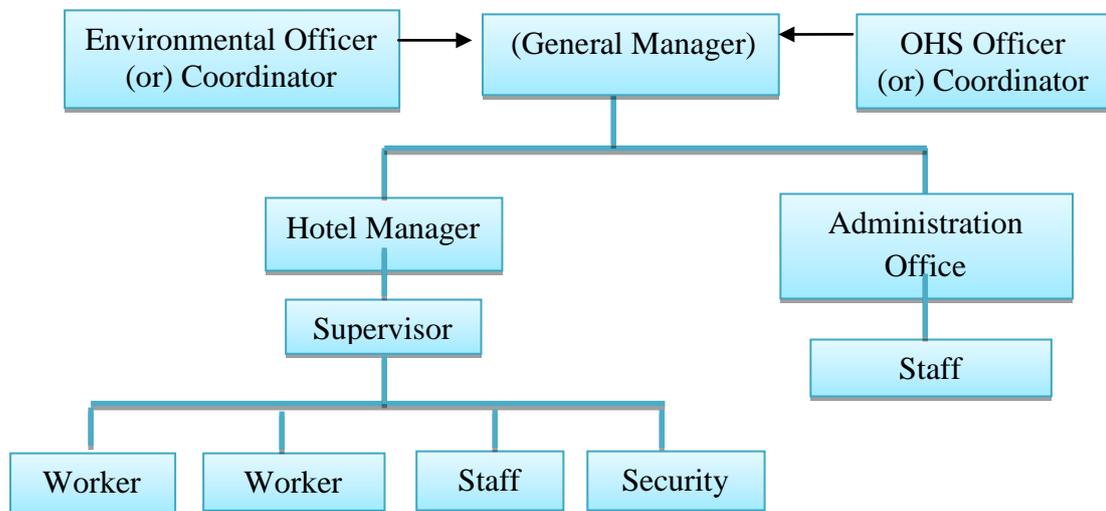
- (a) Identify all environment changes which may cause adverse effects on environment by the project implementation;
- (b) Monitor discharge sources (gas emission, waste water and solid waste) and operation of environmental protection equipment in order to ensure that these activities will comply with legislative requirements;
- (c) Check monitoring process and inspect installation system and equipment in respect of pollution prevention and control;
- (d) Prevent potential incidents;
- (e) Propose appropriate environment protection measures based on results of environmental monitoring;
- (f) Overcome and repair all weak-points based on results of environment monitoring program.

8.1.1. Environmental Monitoring Team for Regular Monitoring

The environmental monitoring team should accomplish regular environmental monitoring. The environmental officer or environmental coordinator should have to be fully responsibility for environmental affair and environmental monitoring. The following table shows proposed organization plan for the environmental monitoring group of the proposed project.

No.	Group Member	Quantity	Remark
1.	Environmental Officer (or) Coordinator	1	To be appointed
2.	Occupational Health and Safety Officer (or) Coordinator	1	To be appointed
3.	Hotel Manager	1	Appointed
4.	Supervisor	1	Appointed
5.	Helpers	1	Appointed

According to the above proposed table, it is necessary to reorganized the proposed organization structure of Century Bright Gold Co., Ltd. (CBG) as follow:



Proposed Organization Structure

Apart from having an Environmental Management Plan, it is necessary to have a permanent staff charged with the task of ensuring its effective implementation of mitigation measures and to conduct environmental monitoring. So, it is necessary to assign environmental officer with necessary monitoring equipment. According to the above table, it is necessary to appoint

environmental officer (or) coordinator and occupational health and safety officer (or) coordinator. It can be signed as dual duty if site manager is able to do workers' safety and health matters. Training program for safety issues should be completed if necessary. Environmental monitoring can also be done by registered third party monitoring agency. Detailed function of the environmental officer but not limited are as follow:

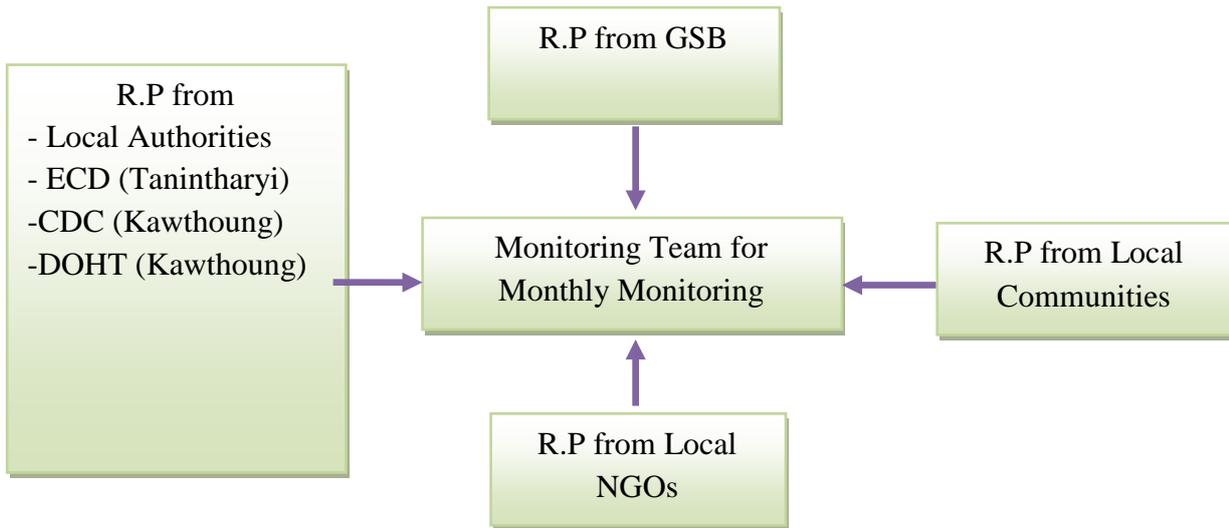
Environmental Officer

The major duties and responsibilities of the environmental officer or person-in-charge for environmental monitoring of proposed resort should be as given below:

- (a) To implement the environmental management plan,
- (b) To assure regulatory compliance with all relevant rules and regulations,
- (c) To ensure regular operation and maintenance of pollution control devices,
- (d) To minimize environmental impacts of operations by strict adherence to the EMP.
- (e) To initiate environmental monitoring as per approved schedule.
- (f) Review and interpretation of monitored results and corrective measures in case monitored results are above the specified limit,
- (g) Maintain documentation of good environmental practices and applicable environmental laws as ready reference,
- (h) Maintain environmental related records,
- (i) Coordination with regulatory agencies, external consultants, monitoring laboratories,
- (j) Maintain of log of public inconvenience and the action taken,
- (k) Ready to solve any complaints from local people about environmental and social issues especially in waste water and traffic.

8.1.2. Environmental Monitoring Team for Monthly Monitoring

Environmental monitoring team for monthly monitoring has to organize representatives from environmental monitoring team for regular monitoring, representative persons from Environmental Conservation Department (ECD, Tanintharyi), City Development Committee (CDC, Kawthoung), Department of Hotels and Tourism (DOHT, Kawthoung), local communities and local NGOs as proposed as follow:



Note: should participate → , R.P = Representative Persons

Proposed Environmental Monitoring Team for Monthly Monitoring

8.1.3. Parameters, Responsibilities, and Estimated Cost for Mitigation and Monitoring

Monitoring should be conducted daily by the environmental monitoring group of proposed hotel resort and monthly by proposed monitoring team or by the registered monitoring agency. Monitoring frequency should be sufficient to provide representative data for the parameter being monitored. Monitoring data should be analyzed and reviewed at regular intervals and compared with the operating standards so that any necessary corrective actions can be taken. Monitoring should be carried out throughout all project implementation phases and the responsibilities for monitoring for construction and operation phases. The parameters base on EMP to be monitored; location of the monitoring sites; frequency and duration of monitoring, responsibilities and estimated cost for each of the monitoring parameters are presented in the following Tables.

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Summary of Impacts and Environmental Management Plan

Item	Project Activities	Potential Environmental Impact	Mitigation Measures	Estimated Cost(USD)	Implementation Frequency	Responsible Party
A. Pre-construction & Construction Phase						
1.	Soilexcavation	Soil quality degradation, top soil losses	<ul style="list-style-type: none"> - Soilwasteshouldbedisposedof properly orcutandfillshouldbe adopted - Landscaping should be done after construction with indigenous tree species if possible 	1000	Onetime after construction	Contractor and CBG and EMM team
2.	Earthmoving activities for operation of heavy machineries and site cleaning (transportation vehicles/boats)	Air pollution, noise pollution, nuisance, injury	<ul style="list-style-type: none"> - Spraying the working ground with water - Control speed of vehicles and operation machineries - Ensure sound condition of construction machinery and equipment - Use of modernized equipment - Workers must be provided with proper PPE such as dust masks during dry and windy conditions and earplugs during working in noisy area. - Local residents should be given notice of intended noisy activities so as to calm down from getting upset 	1,500	Throughout Construction	Contractor and CBG and EMM team

*Initial Environmental Examination (IEE) for Bo Wei Island Resort
HRD/IEE-01-002/19 June, 2019*

3.	Storage of construction materials	Air pollution, soil contamination, fire hazard	<ul style="list-style-type: none"> - Fine grained materials (sand, marl, etc.) should be stockpiled away from surface drainage channels and features. - Flammable materials (e.g. fuels) should be properly stored in appropriate containers and kept separately. Conspicuous warning signs (e.g. 'No Smoking') should also be posted. Firefighting equipment should be placed. - Paved the ground of the storage area or leak proof epoxy flooring should be applied 	800	Throughout Construction	Contractor and CBG and EMM Team
4.	Labor on project site	Soil pollution, water pollution, injury, water consumption	<ul style="list-style-type: none"> - Provide PPEs - Provision of temporary toilets - Separate septic tanks - Applied best construction practices such as using safety harness and life line while working at heights - Provide adequate first aid facilities - Site fencing and safety signboard 	900	Throughout Construction	Contractor and CBG and EMM Team

5.	Constriction waste disposal	Nuisance, Accident,	<ul style="list-style-type: none"> - Waste collection, segregation and disposal should be properly managed and contact to Township Municipality for final disposal. - Reusable inorganic waste (e.g. excavated soil) should be stockpiled away from drainage features and used for filling where necessary. - Reusable or recyclable materials should be recycled and reapplied in order to reduce waste generation - Cleaning should be done daily 	800	Throughout Construction	Contractor and EMM Team
6.	Temporary Employment	Positive	Nil	Nil	Nil	Contractor
B. Operation Phase						
1.	Operation of power generator, refrigerators and air conditioning systems	Air Pollution, Soil Contamination, noise, nuisance, accident, fire hazard	<ul style="list-style-type: none"> - Regular maintenance should be done - Silent types should be used - Secondary Containments should be used - Kept separately with fuel storage area - Fire extinguishers should be kept 	1,000	Throughout Operation	Project Proponent and EMM Team
2.	Water consumption in hotel facilities such as swimming pool, spa, toilet,	Water resources depletion	<ul style="list-style-type: none"> - Water-saving devices should be installed including ultra-low-flush toilet, spray nozzles, urinals, and low-flow showerheads - Install water meter. 	1,000	Throughout Operation	Project Proponent and EMM Team

3.	Electricityandfuelused inhotelservices	Increased energyandfuel consumption	<ul style="list-style-type: none"> - Energysavingdevicesuchasenergy saving bulbs,intelligentdoorlockand energy savingswitchcardwillbeused to reduceenergyconsumption. - Auto switching off electrical equipmentwillbe installedtocontrol energyconservation. 	600	Throughout Operation	Project ProponentandEM MTeam
4.	StorageandHandling of materialsusedfor restaurant, Kitchen	Odor, Health hazard,	<ul style="list-style-type: none"> - Storeinseparatefreezercabinetsfor meals, vegetableand other foods - Everydaycheckallfoodsforitsexpiry date and theirvalidity - Provide adequate such as gloves, masks, hats, etc., - Used qualified chefs - Trainthefollowerstounderstandfood hygiene - Take care the chefs and followers' personal hygiene - Intensive housekeeping should be done at workingandstorage areas 	1,500	Throughout Operation	Project ProponentandEM MTeam

5.	Solidwastefromhotel roomsandgeneralwaste	Nuisance, Soil contamination, injury	<ul style="list-style-type: none"> - Waste segregation system should be adopted - Provideanumbers of bins with labels - Pavetheflooroftemporary waste storage areain order to saveleaking - Recyclablewasteshouldbe sentto recycler and reusablewasteshouldbe reused - Finaldisposalshouldbe followthe guidelines ofTownship Municipality 	600	Throughout Operation	Project Proponentandalso EMMTeam
6.	Solidwastefromkitchen andrestaurants	Odor, nuisance, Soil pollution, health hazard	<ul style="list-style-type: none"> - Food wastes should be collected in enclosed bins - Regular disposalon dailybasis - Install incinerator if possible or otherwisedisposebycomposting - Record waste transfer bynotes 	1,000	Throughout Operation	Project ProponentandE MMTeam
7.	Liquidwaste fromhotel rooms, spa, kitchen and restaurants	Soil pollution, waterpollution,	<ul style="list-style-type: none"> - Installoilandgreaseseparatormethod should beused - Arrange drainstobe well-drained and ensure wastewaternottogooutsideof the project areabeforetreated - Install wastewater treatment plants - Frequently checktheseptic tanknotto overload sludge and pump out - Record waste transfer bynotes 	1,500	Throughout Operation	Project ProponentandE MMTeam

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8.	Hazardous waste	Environmental quality degradation	<ul style="list-style-type: none"> - Use environmental friendly refrigerants for air-conditioners such as R401A, instead of R22. - Used bottles used in cleaning, washing and spa should be collected in separate bins and disposed properly - Record waste transfer by notes 	800	Throughout Operation	Project Proponent and EMM Team
9.	Foreigners show lack of respect to cultural and local people while touring	Archaeological resources, social and cultural impact and may conflict with local people	<ul style="list-style-type: none"> - Hotel should provide awareness program with the assistance of Ministry of Hotels and Tourism. - To avoid traditional, social and cultural impacts, the proponent should adopt the Myanmar Hotel and Tourism Law - Do's and Don'ts labeling in the vicinity area of the hotel - Sharing of leaflets to foreigners for Do's and Don'ts while visiting in Myanmar 	800	Annually	Project Proponent
10.	Emergency Fire	Fire hazard, Fatal case	<ul style="list-style-type: none"> - Provide adequate fire extinguishers and firefighting equipment - Sprinklers should be installed especially in kitchens - Develop firefighting plan and evacuation plan - Organize firefighting, evacuation and first aid trainings. Organize a volunteer firefighting team with hotel employees 	800	Throughout Operation	Project Proponent and EMM Team

11.	EmployeeandStaff	Occupational health and safety problem, damage mentality, air pollution, soil contamination, pollution and infectious diseases	<ul style="list-style-type: none"> - Equip antislip stair tape treads. - Donotallowworkersto enterkitchen withoutkitchen wear. - Provide proper PPEs andqualified first-aiderat all times. - Arrangewelfare planandCreategood working conditions - Food-handling, preparation and storageareasmustwell-managed for workersandguests,especiallyforfood hygiene. - Arrange24hoursstandbyspeed boatfor emergencyhealth case - Give knowledge and awareness training totheworkersaboutthe transmitted diseases (includingsexual) 	2,000	Throughout Operation	Project ProponentandE MMTeam
12.	ProjectImplementation andemployment	Positive				Project ProponentandE MMTeam

Note: Construction service provider (contractor) will have the responsibility for monitoring during construction phase. CBG should ensure that the construction company has the responsibility of monitoring during construction periods and this monitoring responsibility should be included in the agreements of the construction contract. CBG is the most responsible agency for environmental monitoring during operation phase.

Environmental Monitoring Plan

Item	Environmental Concerns	Parameters	Frequency	Locations	Responsible Party
A	Pre-Construction & Construction Phase				
1	Ambient air quality	PM 10, PM2.5, CO, CO2,NO2, SO2	Twice a Year	One point on construction site	CBG Monitoring Team
2	Noise level	Integrating Noise Level Meter dB(A)	Twice a Year	At major construction area	CBG Monitoring Team
3	Water Quality	Colour, Turbidity, Total Hardness, Biological Oxygen Demand (BOD), Suspended Solid, Oil and Grease	Twice a year	2 points, sea water & Tubewells of the project	CBG Monitoring Team
B	Operation Phase				
1	Ambient air quality	PM 10, PM2.5, CO, CO2,NO2, SO2, O3	Once a Year	One point in project area	CBG Monitoring Team
2	Noise level	Equivalent noise level dB(A)	Once a Year	One point at the entrance of the project (as receptor)	CBG Monitoring Team
3	Water Quality	pH, Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Suspended Solids, Total Coliform Bacteria, and Total Nitrogen, Total phosphorus	Twice a Year	Treated water output from waste water treatment plant	CBG Monitoring Team

8.1.4. Important Factors for Environmental Monitoring

The following factors should be considered during the environmental monitoring.

- (a) Monitoring have to done by registered third party monitoring agency or proposed environmental monitoring team of the proposed team. and at least three representatives from proposed monitoring team have to be participated in every monitoring process.
- (b) If monitoring results show constantly (3 consecutive years) and significantly (e.g. less than 75 percent) better than the required levels, frequency of monitoring can be reduced (IFC, World Bank, 2007).
- (c) By studying the wind rose, the most dominant wind direction and wind speed for every season can be predicted and monitoring station for dust, noise and gas emissions should be carried out at that wind direction.

8.1.5. Environmental Management Training Program

Environmental management training program is an important part in EMP. Training and human resource development is an important link to achieve sustainable operation of the facility and environmental management.

Training Program for Construction Phase

During construction phase, construction contractor must ensure that project staffs are trained on labor safety and environment protection during construction phase.

Training Program for Operation Phase

In operation phase, all staff of proposed project must be trained on environment safety throughout training courses to be familiar with operation processes and guidelines, fire fighting exercises and practices, etc. Project Management Board should be established and maintain training programs that are regularly updated to help staff at all levels and related functional departments are aware of their responsibility on environment protection. For successful functioning of the project, relevant EMP's should be communicated to the following groups of people:

Employees

Employees must be made aware of the importance of safety, waste segregation and storage, and energy conservation. This awareness can be provided through leaflets and periodic in house meetings. They should be informed about their responsibilities for successful operation of various environmental management schemes inside the premises.

Site Staff

Relevant personnel at site must be trained for:

- (a) Collection, segregation and storage of the solid and waste generated during operation,
- (b) Operation and maintenance of sewage treatment plant and reclamation system,
- (c) Requirements of the emergency response plan in case of an emergency,
- (d) Techniques for waste minimization, water conservation and energy conservation,
- (e) Applicable environmental, health and safety regulations and compliance requirements,
- (f) Functioning of the environmental management system including environmental monitoring, reporting and documentation needs.

8.1.6. Record Keeping

Record keeping and reporting of performance is an important management tool for ensuring sustainable operation. Records should be maintained for regulatory, monitoring and operational issues. Typical record keeping requirements for the site is summarized in following table.

Record Keeping Requirements

Parameter	Particulars
Resources Use	- Daily quantity of electrical power consumption through power meter - Daily quantity of water use for domestic through water meter
Solid Waste Handling and Disposal	- Weekly quantity and management of residue from water treatment system - Daily quantity and management of domestic solid waste from the proposed resort
Monitoring and Survey	-Records of all monitoring carried out as per the finalized monitoring protocol.
Complaints from Nearest Residents	- Records of all complainants from the nearest villages
Employee Health and Safety	- Daily record for accidents at the resort

Record	
Others	<ul style="list-style-type: none">- Equipment inspection and calibration records, where applicable- Vehicle maintenance and inspection records

8.1.7. Environmental Audits and Corrective Action Plans

To assess whether the implemented EMP is adequate, CBG will conduct periodic environmental audits. Environmental audit is an independent and objective oriented examination of whether the practice complies with expected standards. Broadly, environmental audit means a check on some aspects of environmental management, and implies some kind of testing and verification.

There are two levels of Environmental Audits, i.e. Environmental Impact Audit and Environmental Management Audit. Environmental Impact Audit involves comparing the impacts predicted in an IEE with those that actually occur after implementation of the project while Environmental Management Audit involves checks against adherence to plans, mitigation measures and general compliance of terms and conditions. These audits will be followed by Corrective Action Plans (CAP) to correct various issues identified during the audits.

8.1.8. Reporting Monitoring Results

Results of recorded in files to monitor and audit monitoring will be carried out strictly as required by the related national regulations and the monitoring results of required parameters should be reported to local authorities monthly and copies to MOI (Kawthoung), ECD (Kawthoung), and CDC (Kawthoung).

8.2. Disaster Management Plan

The overall objective of a disaster management plan is to make use of the combined resources created or available at the site and/or off-site services to achieve the following:

- To minimize the effects the accident on people and property;
- Effect the rescue and medical treatment of casualties;
- Safeguard other people, outside the project boundary
- Evacuate people to safe areas with utmost care and with minimum casualties;
- Inform and collaborate with statutory local and state authorities;
- Initially contain and ultimately bring the incident under control;

- Preserve relevant records and equipment for the subsequent enquiry into the cause and circumstances of the emergency;
- Investigate and take steps to prevent recurrence of similar incidents

8.2.1. Risk Assessment Likely Hazards and Possible Disasters

Dangerous conditions or events that threaten or have the potential for causing injury to life or damage to property or the environment is called hazard. Hazards can be categorized in various ways, but based on the origin, they worldwide are basically grouped in two broad headings: -

1. Natural Hazards (hazards with meteorological, geological or even biological origin)
e.g. Earthquake, Tsunamis, Storms, Lightning strikes etc.
2. Manmade Hazards (hazards with human-caused or technological origin)
e.g. Fire & Explosions, Drowning, Sabotage etc.

Vulnerability

Vulnerability may be defined as the probability of exposure of a village, city or a community to a hazard. A society or project may be vulnerable to various hazards to different extents depending upon various reasons including environmental, geographical, social, economic etc.

Disaster

A disaster occurs when a hazard such as earthquake, flood or windstorm coincides with a vulnerable situation. It is hence the product of are two main components: Hazard and Vulnerability. A disaster seriously disrupts the normal functioning of a society, causing widespread human, material, economic or environmental losses that exceed the society's capability to cope without external relief.

8.2.2. Standard Operating Procedures

Standard Operating Procedures have been laid down to guide project authorities and staff to be prepared for disasters and act positively in times of disasters. As disasters can be of various types, separate standard operating procedures have been developed for each kind. These procedures have been prepared with the aim to guide the authorities and staff through the following stages with regards to disaster:

- 1) Precautionary measures
- 2) Disaster Preparedness Onsite

- 3) Disaster Preparedness Offsite
- 4) Emergency response in the event of disaster
- 5) Relief and Rehabilitation
- 6) Evacuation

(1) Precautionary Measures

Precautionary measures for any disaster are to be taken by all the users/visitors of the proposed resort. Hence the measures mentioned below are to be meticulously followed by occupants of the Resort. To be well informed about such precautions a printed booklet will be kept in each resort villa/room.

Earthquake

- BIS codes relevant to the project site shall be adopted for building standards
- Fasten shelves securely to walls.
- All the occupiers should be made aware to place large or heavy objects on lower shelves.
- Information would be provided to store breakable items such as bottled foods, glass, and china in low, closed cabinets with latches.
- Hang heavy items such as pictures and mirrors away from beds, settees, and anywhere people sit.
- Brace overhead light and fan fixtures.
- Repair defective electrical wiring and leaky gas connections. These are potential fire risks.
- Secure a water heater, LPG cylinder etc., by strapping it to the wall studs and bolting it to the floor.
- Store weed killers, pesticides, and flammable products securely in closed cabinets with latches and on bottom shelves.
- Identify safe places indoors and outdoors for occupiers:
 - a) Under strong dining table or bed
 - b) Against an inside wall.
 - c) Away from where glass could shatter around windows, mirrors, pictures, or where heavy bookcase or other heavy furniture could fall over.

- d) In the open, away from building, trees, telephone and electrical lines, flyovers, bridges.
- Emergency telephone number (doctor, hospital, police, etc.) would be displayed on both floors and booklet of the same should be available/ displayed prominently in all rooms.

Floods

- Sewerage and storm water systems to be checked at regular intervals for their proper functioning.
- Provision will be made to harvest most of the rain water from the proposed site. This will reduce the water shortage as well as runoff water on the site.

Cyclones

- Periodical checking of all resort buildings for structural faults, to secure loose tiles, and to carry out timely repairs, will be resorted to.
- Keep some wooden boards ready so that glass windows can be boarded if needed.
- Periodical removal of dead wood or dying trees close to the villas to be undertaken.
- Hurricane lanterns filled with kerosene, battery operated torches and enough dry cells will always be made available during emergencies.
- Keep some extra batteries for transistors.
- Keep some dry non-perishable food always ready for emergency use.

Tsunamis

- An earthquake that lasts 20 seconds or longer in a coastal area may cause tsunamis.
- When the shaking stops, people will be moved quickly to higher ground away from the coast. A tsunami may be coming within minutes.

Lightning Strikes

If Outdoors

- Seek shelter in a hardtop (metal-bodied) vehicle or solid building but not open structures or tents
- Do not take shelter under trees
- Fishing rods, Umbrellas and other metal rods to be avoided
- Distance should be maintained from fences, metal poles, clotheslines etc.
- If on boat or swimming, one should aim to reach the shore as soon as possible

If Indoors

- Disconnect external aerial and power leads to radios and television sets. Disconnect computer s and power leads.
- Draw all curtains and keep clear of windows, electrical appliances, pipes and fixtures (e.g. avoid using bath, shower and electrical equipment's)
- Avoid using telephones, in case of emergency, calls should be brief.
- Avoid touching metal, brick or concrete or tiled floors.

Fire

- Good house-keeping.
- Compulsory use of ashtrays while smoking.
- Welding /Cutting jobs to be carried out under strict supervision.
- Fire Rescue drills to be carried out at regular intervals.

Since fires of different classes require specific precautionary measures to be taken in each case, precautionary measures to be taken for different classes of fires are listed below.

a) Electrical Fires

The following basic precautions are recommended:

- Install only appliances that have the label of a recognized testing laboratory.
- Switches and fuses to conform to correct rating of circuit.
- Use only surge protectors or power strips that have internal overload protection and have ISI or BEE label
- Use light bulbs that match the recommended wattage on the lamp or fixture.
- High voltage points and instruments to be secured and labeled prominently.
- Avoid putting cords where they can be damaged or pinched by furniture, under rugs and carpets, or across doorways.
- Replace any electrical tool if it causes even small electrical shocks, over heats, shorts out or gives off smoke or sparks.
- Routinely check your electrical appliances and wiring. Replace all worn, old or damaged appliance cords immediately. Do not try to repair them.
- Electrical work should be done only by a qualified electrician. Call an electrician if you have any of the following:
 - Recurring problems with blowing fuses or tripping circuit breakers

- A tingling feeling when you touch an electrical appliance
- Discolored or warm wall outlets or switches
- A burning smell or rubbery odor coming from an appliance
- Flickering lights
- Sparks from a wall outlet
- Cracked or broken wall outlets
- Keep clothes, curtains, and other items that can catch fire at least three feet from all portable electric space heaters.

b) Earthquake Fires

- Never place a container with water such as a flower vase or water tank near an electrical appliance. Spilt water on a plug in a socket is likely to cause fire.
- Avoid keeping anything easily inflammable from falling from shelves around a gas cookers in the kitchens and villas, wherever LPG cylinder is used for cooking

Sabotage

- The resort will be fully secured all around the periphery and there will be only one entry and one exit to the entire facility.
- The entry and exit points will be manned for 24 hours with specially trained security staff fully equipped with latest security gadgets including closed circuit electronic surveillance cameras/CCTVs monitoring all sensitive areas within the Resort Complex. A log book will be maintained to record the identities of all “vehicles/staff/guests/visitors” entering and leaving the Resort.
- All “persons/vehicles” entering the resort will be fully checked for explosives and weapons.

Drowning

- Sign ages should be placed on the beach indicating depth at every 0.5 meter till 2.5 meter depth from low tide line, upto a distance of 100 m from low-tide line.

Daily tide timings should be prominently displayed near the beachfront and should be proactively updated daily.

- Lifeguards should be employed to keep a watch on visitors swimming in the beach.

8.3. Disaster Preparedness Onsite

The plan will include alarm equipment's and other measures and the budget for capital and running cost of the plan.

Fire Alarms/Other Measures

Given the location of the resort, it is important to have a proper fire management system. Fire could take place from various accidents; one of them being faulty electrical materials.

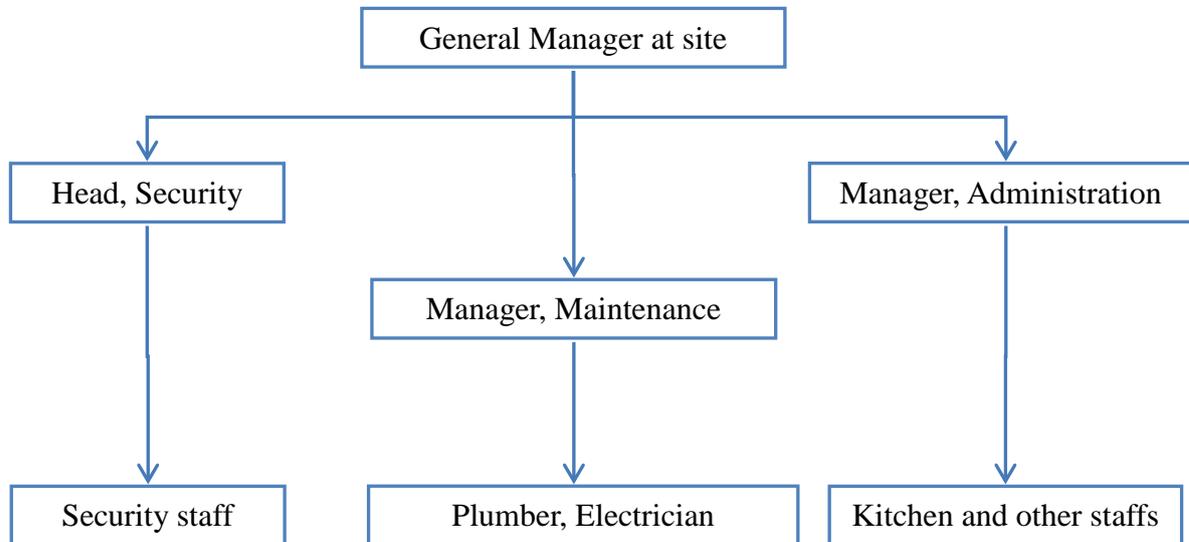
Hence all electrical wiring of the proposed building would be made as per Government standards. Also maintenance of the wiring should be carried out at regular intervals through a professional electrician. Fire and smoke alarm must be installed in every room. An alarm system will be developed so that visitors are informed and all the staff will be informed and trained with regard to the actions taken and operations necessary to efficiently use the system.

To meet the requirements, the following measures will be taken:

- Posters indicating evacuation routes will be displayed in all rooms/villas/kitchens etc. of the resort clearly indicating the position of the poster with 'You are here' mark. Route of evacuation should be indicated by way of arrows, leading to the assembly point.
- Fire and smoke alarms will be installed in all covered places such as rooms, lobbies, halls, kitchens, offices, etc. The functioning of these fire alarms will be checked every week by the resort security staff.
- Courtyard will be paved suitably to bear the load of fire engines.
- Electrical meter room will be sealed with non-combustible materials.
- The lighting in all fire escape routes will be based on independent circuits backed by DG sets.
- Underground and overhead water storage tanks having appropriate capacity will be provided for fire fighting.
- Automatic water sprinklers will be installed in all internal covered spaces.
- Fire Hydrants, Fire Hoses and Fire Extinguishers will be installed throughout the resort as mandated by the Fire Fighting Department (Loughlin).
- Portable fire extinguishers of dry chemical powder will be provided in the electric meter rooms and basements.
- Lightning conductors and other equipment's mandatory as per existing Government Rules will be installed.

Onsite DMP Team

The structure of the team is given below. During the operational phase of the resort, name of the authority and their contact details will be included in the following chart. This will be part of DMP kit which should prominently placed and accessible to all.



Onsite DMP Team

Emergency Equipment's

The site security officer will maintain a list of emergency handling equipment including details of fire extinguishers their validity and potency, protective clothing, and personal protective equipment for emergency handlers etc. The major hospitals, clinics, emergency services shall be kept in the knowledge of all concerned. Fire fighting related water tank with adequate water quantity and system with fire hoses will be kept readily available. All the location of fire extinguisher will be displayed by a notice board.

Disaster Emergency Kit

An emergency kit will be prepared which will have following items:

Table - Emergency Kit and Items and Numbers

Sr. No.	Emergency Kit Item	Numbers
1.	First aid kit and Whistle	1 for each room/villa/kitchen/restauarent/spa
2.	Portable fire extinguisher	4 on each floor of each building
3.	Safety ropes	5

The emergency kit will be augmented frequently after its check regularly. The project proponent will provide a disaster emergency kit which would consist of:

1. Battery operated torch
2. Extra batteries
3. Battery operated radio
4. First aid kit and manual
5. Candles and matches in a waterproof container
6. Knife
7. Chlorine tablets or powdered water purifiers.
8. Can opener
9. Essential medicines
10. Thick ropes and cords
11. Sturdy shoes

Medical and Related Resources

The medical managements for the possible emergency situation essentially consist of First Aid facility. The Security manager must maintain the staff including sweepers, security persons, etc. so that during medico emergency equal weight age would be given to all the members of the society.

Also Security manager should keep the numbers of emergency. Hospitals, so that doctors could be connected at the earliest at the time of medical emergency. These numbers must be prominently displayed on the notice board and can be accessed by the members in absence of Security manager.

Drills

Mock drills activating the Disaster Preparedness Plan will be conducted periodically for ensuring its efficiency during emergency as well as refinement and updation. These drills based on the plan will help achieve its objectives. Head, Security shall be the main coordinator for making people aware of the situation and emergency condition response.

Fire extinguishers would be placed in all floors of all villas and hotel rooms. Every member of staff would be given training on how to use these fire extinguishers. Working of these fire extinguishers would be evaluated every year by a qualified and trained person. If any faulty equipment is observed or any further improvement is needed then it would be repaired.

Proper evacuation plan would be chalked for the resort. The map for the evacuation plan for each hotel/ villa/ restaurant/ kitchen/ spa would be displayed in the respective places. A mock demonstration for evacuation of guests/visitors would be carried out at interval of every six months. These mock drills would be performed in presence of qualified professional. Information would be given to all the members of staff on how react in case of disaster.

Emergency Response in the Event of Disaster

In case of emergency due to any type of disaster a quick and immediate response is essential. This response depends on the actions taken by individuals to avoid or mitigate the adverse effects of a disaster and to undertake search and rescue operations. Following are the actions which will be taken in various emergent situations.

(1) Action in the event of Fire

Extinguishing fires: A small fire at the point of leakage will be extinguished by enveloping it with a water spray or a suitable smothering agent such as CO₂ or DCP (Dry Chemical Power). Trained staff will be engaged in combating fire. Fire fighting personnel working close to un-ignited vapour clouds or close to fire, will be protected continuously by water sprays.

(2) Actions in case of Flood/Tsunami

The resort management shall take all necessary precautions in consultation with the State weather and disaster management authorities.

(3) Lightning strike

Apply immediate heart massage and mouth-to-mouth resuscitation to lightening victims until medical help arrives.

Relief and Rehabilitation

Relief authorities at the site will:

- Encourage self-help in every activity of their day-to-day living.
- Provide assistance for identification/assessment of human and material loss.
- Provide assistance in maintenance of law and order.
- Provide assistance in maintaining sanitation standards and in disposal of waste.
- Promote cultural and recreational activities for mental health.

Measures during Earthquake

- Relief authorities will: Conduct a week-long survey to locate quake related hazards/damages in the resort.
- Work with local emergency services and officials to help affected people and those likely to be affected.
- Provide tips for conducting earthquake drills.

Actions to be taken to prevent impact of Cyclone

- Residents/visitors will be advised to stay tuned to weather advisories broadcast on radio or TV. Radios and TVs in Resort lobbies/restaurants etc. will also be activated for the benefit of residents/guests.
- All windows and external doors of the resort complex will be shut and appropriately secured to withstand high wind speeds.
- Extra food, which can be eaten without cooking, and surplus drinking water will be stocked for the benefit of residents/guests to tide over long power failures and damage to F&B infrastructure.
- Hurricane lanterns, torches and other emergency lights will be made available.
- All loose and unsecured materials which can fly and cause damage due to strong winds, will be removed to safe locations and/or securely fastened.
- Electrical mains will be switched off except for emergency utilities.
- The management will be continuously in touch with the State Disaster Management Authority and scrupulously follow its instructions with respect to the need for evacuation of the resort or any other eventuality.

Evacuation Plan for the Beach Resort

A standard response plan that is to be following by any personal that comes across an emergency situation such as fire needs to follow RACE.

RACE method of Evacuation Plan:

R -Remove All Persons In Danger!

A -Always Pull The Alarm and Call the Emergency Services.

C -Contain The Fire By Closing the Windows and Doors.

E -Extinguish the Fire Only if You Are Trained and Confident.

Followed by this primary response, the evacuation of public vulnerable to fire hazard is the most important step during any emergency fire. Proper co-ordination, prior basic knowledge on how to act in a situation is also essential. The guidelines given below are for the local evacuators and evacuees as well as planners and designers of the emergency response.

- Guidelines for Evacuation In-charge
- Evacuation and Exit Routes for each villa, Hotel room, Kitchen, Restaurant & spa

An assigned on-duty employee will be evacuation in-charge who will command and coordinate the situation.

- The number of exit routes will be adequate, normally two or more depending on: Exit discharge will lead directly outside or to a street, walkway, refuge area, public way, or open space with access to the outside and the area will be large enough.
- Exit stairs that continue beyond the level on which the exit discharge is located will be interrupted at that level by doors, partitions, or other effective means that clearly indicate the direction of travel leading to the exit discharge.
- Exit doors will be able to open from the inside at all times without keys, tools, or special knowledge.
- Exit route will support the maximum permitted occupant load for each floor served.
- Capacity must not decrease in the direction of exit route travel to the exit discharge.
- Ceiling will be at least 7-1/2 ft. high with no projection reaching a point less than 6 ft. - 8 in. from floor.
- An exit access will be at least 28 in. wide at all points.
- Objects that project into the exit route will not reduce the width of the exit route to less than the minimum width requirements for exit routes.
- The assembly point has sufficient area to accommodate persons (0.3 m³/person)
- The plans given below show the refuge area that can be preferred and the service area that can be useful as a junction for escape route.
- The terrace area shown in the plan is open to sky that can accommodate sizable people in case of disaster, also the fire escape passage is provided as an exit route.

8.4. Corporate Social Responsibility (CSR) Program

Contribution at random places with no records will have some social problem due to the lack of transparency. So, CBG should have CSR program to contribute and manage CSR fund effectively.

8.4.1. CSR Fund

CBG should set up fixed CSR fund for local community development. It is important that CSR activities should be accomplished not only by financial assistance but also by technical assistance and manpower in some donations to retain good relation with local communities. Allocated percent of CSR fund is based on local community needs according to the public survey. Proposed allocated percent of CSR budget are as follow:

No.	Activities	Proposed allocated per cent of CSR budget	Public Needs according to Public Consultation Processes
1.	Donation to NGOs and CBOs	10%	Yes
2.	Construction of roads	30%	Yes
3.	Donation to schools	20%	Yes
4.	Donation to health care facilities	20%	Yes
5.	Provide upgrading of local products to value added products	20%	Yes
Total		100%	

8.4.2. CSR Officer (or) Coordinator

CBG should assign CSR officer (or) CSR coordinator to closely relate with local people in order to manage the contributions of CSR fund effectively. HR manager can also be assigned as CSR officer. CSR officer should donate CSR fund after the discussion with representative people from nearest villages.

8.4.3. Proposed CSR Activities

The following are the proposed CSR activities and most of the CSR activities are according to the public needs during social survey and determination of SIA Team for local community development. All of the proposed activities will improve the socio-economic conditions of nearest villages significantly.

- (a) Health Care Facilities;
- (b) Education;
- (c) Village Roads
- (d) Upgrading of local products to valuable products development;

- (e) Participating in Government Schemes; and
- (f) Funds for NGOs and INGOs.

Health Care Facilities

According to social survey, there is no public health care facility for nearest residents. So, health care facilities of proposed project should be assessed to nearest local people with lowest or no charge as part of CSR program. Ambulance for emergency case should be provided for local people in nearest villages.

Education

Distribution of education materials and financial aid or scholar grants to the students who are economically deprived in the nearest villages of the proposed resort will have a great benefit for students. Most of the schools in nearest villages are furnished inadequately and upgrade and fulfillment of educational requirements and facilities are recommended to be included in SR program.

8.4.4. Participating Government Schemes for Social Welfare

CBG should actively participate in implementation of government schemes for welfare of the society of the Kawthoung region.

8.4.5. Cooperation with Local NGOs

CBG should cooperate with local NGOs and CBOs in nearest villages in the activities to improve regional, religious, and all round developments in Kawthoung Region. Some percentage of CSR fund should provide regularly to NGOs and CBOs in nearest villages.

8.4.6. Upgrading of Local Product to Value Added Product

CBG will use 20% of CSR fund in research and development of upgrading of local products (sea food, decorative materials from mollusks and crustaceans, beautiful products from coconut etc.)

8.4.6. Declare the Contribution of CSR Fund

All of the CSR activities and contribution programs should be declared to public by means of local media, company annual report or company's website on a regular basis. Audit on contribution of CSR fund should be carried out together with environmental and social audits through independent external audit team for transparency.

9. PUBLIC CONSULTATION AND DISCLOSURE

9.1 Importance of Public Consultation and Information Disclosure

The opinions of the local people, social organizations and stakeholders with the development of the proposed project have been taken into account in the IEE. The public consultation indicated the transparency of IEE's proponents to the local people. Consultation meetings were held with various stakeholders including communities near project area, administrative, community based and social organizations. The results getting from the consultations meeting and negotiations with environmentally and socially of the affected people were taken into consideration in evaluation of impacts, design of mitigation measures and monitoring plans. Negotiation with related governmental organizations was also done. All feedbacks from public consultation meetings were well addressed and considered in the formulation of EMP, environmental monitoring plan and CSR plan.

9.2. Data Collection

The primary data for environmental, social and health profiles were collected by household survey during study period. The project data, site layout plans and design parameter are provided by Century Bright Gold Co., Ltd. Some secondary data on demographic distribution in the area are sourced from local government offices of Kawthoung.

9.3. Public Consultation and Participation Process

Integral to the impact assessment is the process of stakeholder engagement which has been ongoing. The public participation process included:

- (i) Identifying interested and affected parties (stakeholders);
- (ii) Informing and providing the stakeholders with sufficient background and technical information regarding the proposed development;
- (iii) Creating opportunities and mechanisms whereby they can participate and raise their viewpoints (issues, comments, and concerns) with regard to the proposed development;
- (iv) giving the stakeholders feedback on process findings and recommendations; and
- (v) Ensuring compliance to process requirements with regards to the environmental and related legislation.

9.4. Public Meetings

Public meeting was held in (13.5.2019) Kawthoung. There were about 150 people from local communities who are directly or indirectly affected by the proposed project are attended in this meeting. The aims of the first public meeting are:

- (i) To aware the process and procedure of IEE;
- (ii) To say publicly about the potential environmental and social impacts;
- (iii) To discuss about the alternative ways and possible mitigation measures to avoid the possible impacts.
- (iv) To clarify about the public needs and concerns.

Attendance list, suggestion letters of public meeting and key discussions during the meeting are shown in Appendix I.





9.5. Public Disclosure Process

Softcopies for meeting minutes (See in Appendix II) was distributed to all participants during second public meeting. Summary of IEE report in Myanmar Language was also distributed to all key stakeholders as public disclosure process

Draft IEE report was distributed to all key stakeholders and will be made available for public comment for a period of 30 days in the following ways:

- By raising comments during a series of public meetings where the content of the draft IEE Report will be presented;
- By completing a comment sheet made available together with the report at the public places, and by submitting additional written comments, by email or fax, or by telephone, to the HRD Environmental Training and Services Office.

All comments and issues raised during the comment period on the draft IEE report will be added to the comment and response report that will accompany the Final Report.

10. CONCLUSION

This IEE report reviews the key anticipated environmental and social impacts of proposed project. Moreover, proper mitigation measures for these anticipated impacts and good environmental management practices, which do not reduce hotel process were described in this report. According to the IEE study, all of the major and minor environmental and social impacts can be reduced by proper mitigation measures described in this report. To summarize, it can be concluded that all of the anticipated adverse impacts of the project can be minimized by the proper mitigation measures described in this report and the proposed hotel zone project can be allowed to operate if the project proponent (CBG) will do all of the mitigation and enhancement measures described in this report.

APPENDICES

APPENDIX 1

Attendance List, Suggestion Letters of Public Meeting and Key Discussions



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တနင်္သာရီတိုင်းဒေသကြီး၊ ကော့သောင်းခရိုင်၊ ဘိုဘိုးကျွန်းပေါ်တွင် century Bright Gold Company မှ တည်ဆောက်မည့် ဟိုတယ်အပန်းဖြေစခန်း စီမံကိန်းအား လူထု တွေ့ဆုံပွဲ အခမ်းအနား တက်ရောက်လာသူများ ရက်စွဲ။ ၁၃-၅-၂၀၁၉ နေရာ။ Garden Hotel, Kawthaung

စဉ်	အမည်	ဌာန၊ ကျေးရွာ၊ မြို့နယ်၊	လက်မှတ်
၁.	ဖော်စိုးမမကေး	Today တက္ကသိုလ်၊ ဘုရင့်နောင်	
၂.	ဒေါ်အေး၊ ဒေါ်စို	၀၀၀	
၃	ဒေါ်စောမာလယ်	မောင်ဘုမ	
၄	ဒေါ်အေးဇော်ဇော်	မရီတယ်လ်ဂျီ	
၅	ဒေါ်ဇော်ဇော်	ရှမ်းကျွန်းမြို့နယ်	
၆.	ဒေါ်မာမာစောစောဇော်	HRD.	
၇.	ဒေါ်ဇော်မာမာ	KTGA	
၈	ဒေါ်ဇော်မာမာ	မောင်မောင်ဘုမ	
၉	ဒေါ်သန်းဇော်	၂၂	
၁၀	ဒေါ်စာစိန်	၂	
၁၁.	ဒေါ်လှစော	၇၇၇ ဇော်	
၁၂	ဒေါ်စိုစို	၂	
၁၃.	ဒေါ်မာမာစိုစို	DVB	



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တနင်္သာရီတိုင်းဒေသကြီး၊ ကော့သောင်းခရိုင်၊ ဘိုဝိုးကျွန်းပေါ်တွင် century Bright Gold Company မှဟိုတယ်အပန်းဖြေစခန်း စီမံကိန်းအား လူထု တွေ့ဆုံပွဲ အခမ်းအနား တက်ရောက်လာသူများ

ရက်စွဲ။ ၁၃-၅-၂၀၁၉

နေရာ။ Garden Hotel, Kawthaung

စဉ်	အမည်	ဌာန၊ ကျေးဇူး၊ မြို့နယ်	လက်မှတ်
၁.	ဦးအောင်	မြို့အုပ်ကြီးရုံး၊ ဘိုဝိုးကျွန်းပေါ်	[Signature]
၂.	ဦးကျော်သက်	၂၃. မိုးခန့်ခွဲရေးဌာန	[Signature]
၃.	ဦးမျိုးမိုး	CSO, ဗဟိုဌာန	[Signature]
၄.	ဦးစိုးလယ်	၁၇၃. ပဲခူးတိုင်း၊ ဘိုဝိုးကျွန်းပေါ်	[Signature]
၅.	ဒေါ်အေးအေး	ဗဟိုဌာန	[Signature]
၆.	ဦးအောင်	ဗဟိုဌာန	[Signature]
၇.	ဦးစိုးမိုး	ဗဟိုဌာန	[Signature]
၈.	ဦးစိုးမိုး	ဗဟိုဌာန	[Signature]
၉.	ဦးကျော်မိုး	ဗဟိုဌာန	[Signature]
၁၀.	ဦးကျော်မိုး	ဗဟိုဌာန	[Signature]
၁၁.	ဦးကျော်မိုး	ဗဟိုဌာန	[Signature]
၁၂.	ဦးကျော်မိုး	ဗဟိုဌာန	[Signature]
၁၃.	ဦးကျော်မိုး	ဗဟိုဌာန	[Signature]
၁၄.	ဦးကျော်မိုး	ဗဟိုဌာန	[Signature]
၁၅.	ဦးကျော်မိုး	ဗဟိုဌာန	[Signature]
၁၆.	ဦးကျော်မိုး	ဗဟိုဌာန	[Signature]



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Stakeholders Consultation Questionnaire

အမည်... ဒိုးဝေလတ် စီမံကိန်းအမည်... ကမ်းခြေလှည့်ပန်းခြံ
 နေ့စွဲ... ၂၉.၆.၂၀၁၉

မေးမြန်းသည့်နေရာ (သို့) ဖြေဆိုသည့်နေရာ.....

စဉ်	Environmental and Social Impacts ပတ်ဝန်းကျင်နှင့်လူမှုပတ်ဝန်းကျင်အပေါ် ထိခိုက်မှုများ	(Yes/ NO) ဖြစ်နိုင်/ မဖြစ်နိုင်	Comments on Project ထင်မြင်ချက်
၁	ယခုစီမံကိန်းသည် ပတ်ဝန်းကျင်နေထိုင်သူများအတွက် ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	မဖြစ်နိုင်	ခြေရာအကြီးအကျယ်များ ရေးသားနိုင်ပါသည်
၂	ယခုစီမံကိန်းကြောင့် အနီးအနားပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်များကို ထိခိုက်နိုင်ပါသလား	မထိခိုက်နိုင်	
၃	ယခုစီမံကိန်းကြောင့် ကြီးထွားမှု သဘာဝအရင်းအမြစ်များကို ထိခိုက်နိုင်ပါသလား	မထိခိုက်နိုင်	မိသားစု တစ်ခုစီ တွင်လည်း ကျင့်သုံးစေရန် ကမ်းခြေ ချွေလှမ်းခြင်း
၄	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝ ပတ်ဝန်းကျင်ကို ထိခိုက်နိုင်ပါသလား	မထိခိုက်နိုင်	မချိန်မတွေး ဂျာသီ
၅	ယခုစီမံကိန်းကြောင့် အသံဆူညံမှု၊ တုန်ခါမှု၊ များ ဖြစ်နိုင်ပါသလား	မဖြစ်နိုင်	၃ ဂျာစီ ဖိတ် ဝန်ပေးတဲ့ မချိန်တွင် ချွေလှမ်း
၆	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ လူမှုပတ်ဝန်းကျင် ပိုမိုကောင်းမွန်လာနိုင်ပါသလား	ကောင်းမွန်လာမည်	များကား မသက်တော့
၇	ယခုစီမံကိန်းကြောင့် သယ်ယူပို့ဆောင်ရေးလမ်းကြောင်း သို့မဟုတ် အထောက်အကူပြုလုပ်ငန်းအဆောက်အအုံများကို ပိုမို ပြုပြင်ထိန်းသိမ်း ကြပ်သွားနိုင်ပါသလား	မထင်သွားနိုင်ပါ	ကျွန်ုပ်တို့ကား မချိန်မတွေး ဝင်ရောက် ခြင်းရန်
၈	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများကို ကျန်းမာရေးဆိုင်ရာ ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	မပေးနိုင်ပါ	ခွင့်ပြုမိပါသည်ဟု မထင်မြင်ပါဘူး
၉	ယခုစီမံကိန်းကြောင့် အလုပ်အကိုင်အခွင့်အလမ်းများကို အနှောင့်အယှက်ဖြစ်စေပါသလား	မဖြစ်စေနိုင်ပါ	

Signature (လက်မှတ်)..... [Signature]
 Name (အမည်)..... ဒိုးဝေလတ်
 Address (နေရပ်လိပ်စာ)..... ၂၆၆ ချောင်းခြေလမ်း၊ ရေအောက်သာရွာ၊ ကွက်
ကော့လောင်းမြို့



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စီမံကိန်းအမည်..... ကမ်းနီး ဟယ်ဝင်
 မြို့နယ်..... ကော့လောင်းမြို့

အကြံပြုချက်များ ရှိပါက ရင်းနှီးပွင့်လင်းစွာ ရေးသားအကြံပေးစေလိုပါသည်။

ရက်စွဲ။ ..12.5.2019

စဉ်	အကြံပြုလွှာ
	<p>တပိုင်တိုင်မိသားတခု ကမ်းနီး ဧပြေငယ် မြား သာဠာအိမ်အိမ် မေတ္တုး ဣဒီ ခုတူ ဇာကဏ်ဇန်ဇာရင်- ကမ်းနီး ဧပြေငယ် မြား ဇာ- အိမ် မေတ္တုး ဝင် / ထွက် သွား လာ မြို့ မြား ခွင့်ပြုပေး ဖို့ ကာဝန် သန့် လှူစီမံ မင်း မြား ဇာ- ဟယ်ဝင် မကြံ့မာမာပါ သည်။</p>

လက်မှတ်.....
 အမည်..... ဦး ဝင်းလတ်
 ဆက်သွယ်ရန်လိပ်စာ..... / ဇီး- မင်း မြား
 မြို့နယ်- ကော့လောင်းမြို့နယ်
 ဖုန်းနံပါတ်..... ၀၉-၉၅၀၈၃၇၇၇၇၅



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Stakeholders Consultation Questionnaire

အမည်..... ဦးလှအောင်..... စီမံကိန်းအမည်..... ခေတ်ကျန်းနှင့်ဘိုဝီကျွန်း-ပေါင်ဘို Hotel Resort
 နေ့စွဲ..... 19.6.19.....

မေးမြန်းသည့်နေရာ (သို့) ဖြေဆိုသည့်နေရာ.....

စဉ်	Environmental and Social Impacts ပတ်ဝန်းကျင်နှင့်လူမှုစီးပွားရေးအပေါ်ထိခိုက်မှုများ	(Yes/ NO) ဖြစ်နိုင်/ မဖြစ်နိုင်	Comments on Project ထင်မြင်ချက်
၁	ယခုစီမံကိန်းသည် ပတ်ဝန်းကျင်နေထိုင်သူများအတွက် ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	No	ခြေခံစွက်အကြမ်းချက်များ ရေးသားနိုင်ပါသည်
၂	ယခုစီမံကိန်းကြောင့် အနီးအနားပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်များကို ထိခိုက်နိုင်ပါသလား	No	
၃	ယခုစီမံကိန်းကြောင့် ကြီးမားသော သဘာဝအရင်းအမြစ်များကို ထိခိုက်နိုင်ပါသလား	No	
၄	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝ ပတ်ဝန်းကျင်ကို ထိခိုက်နိုင်ပါသလား	No	
၅	ယခုစီမံကိန်းကြောင့် အသံဆူညံမှု၊ တုန်ခါမှု၊ များ ဖြစ်နိုင်ပါသလား	No	
၆	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ လူမှုစီးပွားရေး ပိုမိုကောင်းမွန်လာနိုင်ပါသလား	No	
၇	ယခုစီမံကိန်းကြောင့် သယ်ယူပို့ဆောင်ရေးလမ်းကြောင်း သို့မဟုတ် အထောက်အကူပြုလုပ်ငန်းအဆောက်အအုံများကို ပိုမို ပြုတ်သိပ် ကြပ်သွားနိုင်ပါသလား	No	
၈	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများကို ကျန်းမာရေးဆိုင်ရာ ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	No	
၉	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်အခွင့်အလမ်းများကို အနှောင့်အယှက်ဖြစ်စေပါသလား	No	

Signature (လက်မှတ်).....

Name (အမည်)..... ဦးလှအောင်

Address (နေရပ်လိပ်စာ)..... ကမ္ဘာ့ (၂၁၅)၊ မိုက်ဘူ၊ ၁၅ ကမီ၊ ၇၅၉ ခေတ်ကျန်း
 ဝေးကမ်း (၆၅)



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Stakeholders Consultation Questionnaire

အမည် ဒါက်ဇင် စီမံကိန်းအမည် ပေတီကျွန်းကျွန်းပျော်ရွှင်ရာ Hotel Resort
 နေ့စွဲ 13. MAY 2019
 မေးမြန်းသည့်နေရာ (သို့) ဖြေဆိုသည့်နေရာ GARDEN HOTEL KAOTHAUNGS

စဉ်	Environmental and Social Impacts ပတ်ဝန်းကျင်နှင့်လူမှုပတ်ဝန်းကျင်အပေါ်ထိခိုက်မှုများ	(Yes/ NO) ဖြစ်နိုင်/ မဖြစ်နိုင်	Comments on Project ထင်မြင်ချက်
၁	ယခုစီမံကိန်းသည် ပတ်ဝန်းကျင်နေထိုင်သူများအတွက် ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	မရှိပါ။	ခြေခံစွက်အကြီးအကျယ်များ ရေးသားနိုင်ပါသည်
၂	ယခုစီမံကိန်းကြောင့် အနီးအနားပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်များကို ထိခိုက်နိုင်ပါသလား	မရှိပါ။	
၃	ယခုစီမံကိန်းကြောင့် ကြီးထွားရေး သဘာဝအရင်းအမြစ်များကို ထိခိုက်နိုင်ပါသလား		
၄	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝ ပတ်ဝန်းကျင်ကို ထိခိုက်နိုင်ပါသလား		
၅	ယခုစီမံကိန်းကြောင့် အသံဆူညံမှု၊ တုန်ခါမှု၊ များ ဖြစ်နိုင်ပါသလား	မရှိပါ။	
၆	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ လူမှုပတ်ဝန်းကျင် ပိုမိုကောင်းမွန်လာနိုင်ပါသလား	မရှိပါ။	
၇	ယခုစီမံကိန်းကြောင့် သယ်ယူပို့ဆောင်ရေးလမ်းကြောင်း သို့မဟုတ် အထောက်အကူပြုလုပ်ငန်းအဆောက်အအုံများကို ပိုမို ပြုတ်သိပ် ကြပ်သွားနိုင်ပါသလား	မရှိပါ။	
၈	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများကို ကျန်းမာရေးဆိုင်ရာ ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား		
၉	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်အခွင့်အလမ်းများကို အနှောင့်အယှက်ဖြစ်စေပါသလား	မရှိပါ။	

Signature (လက်မှတ်).....
 Name (အမည်)..... ဒါက်ဇင်
 Address (နေရပ်လိပ်စာ)..... ကံ့၊ ၈၈၊ ပေတီကျွန်းကျွန်းပျော်ရွှင်ရာ



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စီမံကိန်းအမည်: စောင့်ရှောက်ရေးနှင့် ဆေးကုသရေး ဗဟို Hotel Resort ဒီဇိုင်း
 မြို့နယ်: မော်လမြိုင်

အကြံပြုချက်များ ရိုပါက ရင်းနှီးပွင့်လင်းစွာ ရေးသားအကြံပေးစေလိုပါသည်။

ရက်စွဲ: 13.6.19

စဉ်	အကြံပြုချက်
	<p><u>မြို့နယ်အတွင်းရှိ ရေအရင်းအမြစ်များကို ထိခိုက်စေရန် ရှောင်ကြဉ်ရန်၊ ရေအရင်းအမြစ်များကို ထိခိုက်စေရန် ရှောင်ကြဉ်ရန်</u></p>

လက်မှတ်.....
 အမည်.....
 ဆက်သွယ်ရန်လိပ်စာ.....
 ဖုန်းနံပါတ်.....



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Stakeholders Consultation Questionnaire

အမည်... ဒေါ်ခိုးမမအေး စီမံကိန်းအမည်... 6007 ဖွဲ့စည်းရေးကော်မရှင်၊ ခက် Hotel Resort
 နေ့စွဲ... 13.5.19

မေးမြန်းသည့်နေရာ (သို့) ဖြေဆိုသည့်နေရာ.....

စဉ်	Environmental and Social Impacts ပတ်ဝန်းကျင်နှင့်လူမှုစီးပွားရေးအပေါ် ထိခိုက်မှုများ	(Yes/ NO) ဖြစ်နိုင်/ မဖြစ်နိုင်	Comments on Project ထင်မြင်ချက်
၁	ယခုစီမံကိန်းသည် ပတ်ဝန်းကျင်နေထိုင်သူများအတွက် ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	NO	ဖြစ်စွက်အကြီးအကျယ်များ ရေးသားနိုင်ပါသည်
၂	ယခုစီမံကိန်းကြောင့် အနီးအနားပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်များကို ထိခိုက်နိုင်ပါသလား	NO	
၃	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝအရင်းအမြစ်များကို ထိခိုက်နိုင်ပါသလား	-	
၄	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝ ပတ်ဝန်းကျင်ကို ထိခိုက်နိုင်ပါသလား	-	
၅	ယခုစီမံကိန်းကြောင့် အသံဆူညံမှု၊ တုန်ခါမှု၊ များ ဖြစ်နိုင်ပါသလား	Yes	
၆	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ လူမှုစီးပွားရေး ပိုမိုကောင်းမွန်လာနိုင်ပါသလား	Yes	
၇	ယခုစီမံကိန်းကြောင့် သယ်ယူပို့ဆောင်ရေးလမ်းကြောင်း သို့မဟုတ် အထောက်အကူပြုလုပ်ငန်းအဆောက်အအုံများကို ပိုမို မြှင့်တင်နိုင်ကြပါသလား	NO	
၈	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများကို ကျန်းမာရေးဆိုင်ရာ ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	NO	
၉	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်အခွင့်အလမ်းများကို အနှောင့်အယှက်ဖြစ်စေပါသလား	NO	

Signature (လက်မှတ်)
 Name (အမည်) ဒေါ်ခိုးမမအေး
 Address (နေရပ်လိပ်စာ) Today စာရင်းစဉ် 1408-A (ပျိုနီလမ်း)၊ ဘုရင့်ရောင်၊ ကန်စောင်း



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စီမံကိန်းအမည်... စေတနာ့လှူငွေနှင့်အိမ်ရာလှူငွေပေါ်ရှိ Hotel Resort စီမံကိန်း
 မြို့နယ်... ကော့သောင်း

အကြံပြုချက်များ ရှိပါက ရင်းနှီးပွင့်လင်းစွာ ရေးသားအကြံပေးစေလိုပါသည်။

ရက်စွဲ... 19. 5. 19

စဉ်	အကြံပြုချက်
	<p>လုပ်ငန်းဆောင်ရွက်မှု ကနဦးခရီးစဉ်တွင် ကျွန်းပေါ်သို့ ကတု လိုက်ပါလေ့လာခွင့် ရရှိခဲ့ပါသည်။ စနစ်တကျ ဖြစ်ဆင်မှုများ၊ တိုင်းတာမှုများဖြင့် လုပ်ကိုင် ဆောင်ရွက်နေကြသဖြင့် ကျေနပ်စားရပါသည်။ Company ၏ လုပ်ငန်းဆောင်ရွက်မှုများ ကောင်းမွန်စေရန်အတွက် ကော့သောင်း မြို့နယ် ယူအေ၏ အဝတ်တိုက်မှု၊ မြို့သာယာလှပမှု ရွေးကောက်ပွဲ၊ ကောင်းသော စာတောင်းစာလဲ ဖြစ်စေရန်အတွက် အကြံပြုရပါသည်။</p>

လက်မှတ်...
 အမည်...
 ဆက်သွယ်ရန်လိပ်စာ... Today စာရင်းအုပ်
 408-A, ယွိုင်လမ်း၊ ကုန်းတန်း
 ဖုန်းနံပါတ်... ၀၇၅၅၀၇၀၂၇၆၇



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Stakeholders Consultation Questionnaire

အမည်..... ဦးဝင်းဦး..... စီမံကိန်းအမည်..... ကေတိကျွန်းနှင့်ချစ်ကျွန်းခရီးစဉ် Hotel
 မေပြန်သည့်နေရာ (သို့) ဖြေဆိုသည့်နေရာ..... Garden Hotel Kawthaung..... နေ့စွဲ..... ၁၃. ၁. ၂၀၁၉.....

စဉ်	Environmental and Social Impacts ပတ်ဝန်းကျင်နှင့်လူမှုပတ်ဝန်းကျင်အပေါ်ထိခိုက်မှုများ	(Yes/ NO) ဖြစ်နိုင် / မဖြစ်နိုင်	Comments on Project ထင်မြင်ချက်
၀	ယခုစီမံကိန်းသည် ပတ်ဝန်းကျင်နေထိုင်သူများအတွက် ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	မဖြစ်နိုင်	ခြေစိုက်အကြံပြုချက်များ ရေးသားနိုင်ပါသည်
၂	ယခုစီမံကိန်းကြောင့် အနီးအနားပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်များကို ထိခိုက်နိုင်ပါသလား	မထိခိုက်နိုင်	
၃	ယခုစီမံကိန်းကြောင့် ကျွန်ုပ်တို့၏ သဘာဝအရင်းအမြစ်များကို ထိခိုက်နိုင်ပါသလား	မထိခိုက်နိုင်	
၄	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝ ပတ်ဝန်းကျင်ကို ထိခိုက်နိုင်ပါသလား	မထိခိုက်နိုင်	
၅	ယခုစီမံကိန်းကြောင့် အသံဆူညံမှု၊ တုန်ခါမှု၊ များ ဖြစ်နိုင်ပါသလား	မဖြစ်နိုင်	
၆	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ လူမှုပတ်ဝန်းကျင် ပိုမိုကောင်းမွန်လာနိုင်ပါသလား	ကောင်းလာမည်	
၇	ယခုစီမံကိန်းကြောင့် သယ်ယူပို့ဆောင်ရေးလမ်းကြောင်း သို့မဟုတ် အထောက်အကူပြုလုပ်ငန်းအဆောက်အအုံများကို ပိုမို ပြုပြင်ထိန်းသိမ်း ကြည့်ရှုနိုင်ပါသလား	မဖြစ်နိုင်	
၈	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများကို ကျန်းမာရေးဆိုင်ရာ ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	မပေးနိုင်ပါ	
၉	ယခုစီမံကိန်းကြောင့် အလုပ်အကိုင်အခွင့်အလမ်းများကို အနှောင့်အယှက်ဖြစ်စေပါသလား	မထိခိုက်ပါ။ ပိုမိုကောင်းမွန်လာစေပါမည်။	

Signature (လက်မှတ်).....
 Name (အမည်)..... ဦးဝင်းဦး B.E (Mech.) '84
 Address (နေရပ်လိပ်စာ)..... ကေတိကျွန်း၊ ဘ.လှိုင်၊ နှစ် ၅၆၊ ပုလဲ၊ ရေဒီယို၊
 ပုလဲ၊ ဝမ်းကျန်းကျေးရွာ၊ ကေတိကျွန်း၊



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Stakeholders Consultation Questionnaire

အမည်..... ဦးကျော်ကျော်..... စီမံကိန်းအမည်..... ဝေဘိုကျွန်းကျွန်းပေါက်ကျွန်းပေါက် Hotel Resort
 မေ့မြန်းသည့်နေရာ (သို့) ဖြေဆိုသည့်နေရာ..... Garden Hotel..... နေ့စွဲ..... 13.5.19

စဉ်	Environmental and Social Impacts ပတ်ဝန်းကျင်နှင့် လူမှုပတ်ဝန်းကျင်အပေါ် ထိခိုက်မှုများ	(Yes/ NO) ဖြစ်နိုင် / မဖြစ်နိုင်	Comments on Project ထင်မြင်ချက်
၁	ယခုစီမံကိန်းသည် ပတ်ဝန်းကျင်နေထိုင်သူများအတွက် ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	No	ဖြည့်စွက်အကြံပြုချက်များ ရေးသားနိုင်ပါသည်
၂	ယခုစီမံကိန်းကြောင့် အနီးအနားပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်များကို ထိခိုက်နိုင်ပါသလား	No	
၃	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝအရင်းအမြစ်များကို ထိခိုက်နိုင်ပါသလား	Yes	
၄	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝ ပတ်ဝန်းကျင်ကို ထိခိုက်နိုင်ပါသလား	Yes	
၅	ယခုစီမံကိန်းကြောင့် အသံဆူညံမှု၊ တုန်ခါမှု၊ များ ဖြစ်နိုင်ပါသလား	No	
၆	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ လူမှုပတ်ဝန်းကျင် ပိုမိုကောင်းမွန်လာနိုင်ပါသလား	Yes	
၇	ယခုစီမံကိန်းကြောင့် သယ်ယူပို့ဆောင်ရေးလမ်းကြောင်း သို့မဟုတ် အထောက်အကူပြုလုပ်ငန်းအဆောက်အအုံများကို ပိုမို မြှင့်တင်နိုင်ပါသလား	No	
၈	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများကို ကျန်းမာရေးဆိုင်ရာ ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	No	
၉	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်အခွင့်အလမ်းများကို အနှောင့်အယှက်ဖြစ်စေပါသလား	Yes	

Signature (လက်မှတ်)..... [Signature]
 Name (အမည်)..... ဦးကျော်ကျော်
 Address (နေရပ်လိပ်စာ)..... ၀၇၂၅၁၁၄၇၇၄၄



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Stakeholders Consultation Questionnaire

အမည်..... ဦး ကံသွန်း စီမံကိန်းအမည်..... ကမကန်ကျွန်း နှင့် ကိုဝိကျွန်း ပေါ်ရှိ ဟိုတယ် နှစ်ဖက်ရိုး နေ့စွဲ..... ၁၃. ၅. ၂၀၁၉

မေးမြန်းသည့်နေရာ (သို့) ဖြေဆိုသည့်နေရာ.....

စဉ်	Environmental and Social Impacts ပတ်ဝန်းကျင်နှင့် လူမှုပတ်ဝန်းကျင်အပေါ် ထိခိုက်မှုများ	(Yes/ NO) ဖြစ်နိုင် / မဖြစ်နိုင်	Comments on Project ထင်မြင်ချက်
၁	ယခုစီမံကိန်းသည် ပတ်ဝန်းကျင်နေထိုင်သူများအတွက် ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	မထင်ပါ	ဖြစ်စေရန်အကြံပြုချက်များ ရေးသားနိုင်ပါသည်
၂	ယခုစီမံကိန်းကြောင့် အနီးအနားပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်များကို ထိခိုက်နိုင်ပါသလား	မထင်ပါ	
၃	ယခုစီမံကိန်းကြောင့် ကျွန်ုပ်တို့၏ သဘာဝအရင်းအမြစ်များကို ထိခိုက်နိုင်ပါသလား		
၄	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝ ပတ်ဝန်းကျင်ကို ထိခိုက်နိုင်ပါသလား		
၅	ယခုစီမံကိန်းကြောင့် အသံဆူညံမှု၊ တုန်ခါမှု များ ဖြစ်နိုင်ပါသလား	မဖြစ်နိုင်ပါ	
၆	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ လူမှုပတ်ဝန်းကျင် ပိုမိုကောင်းမွန်လာနိုင်ပါသလား	ကောင်းမွန်နိုင်ပါသည်	
၇	ယခုစီမံကိန်းကြောင့် သယ်ယူပို့ဆောင်ရေးလမ်းကြောင်း သို့မဟုတ် အထောက်အကူပြုလုပ်ငန်းအဆောက်အအုံများကို ပိုမို ပြုပြင်ထိန်းသိမ်း ကြပ်သွားနိုင်ပါသလား	မဖြစ်နိုင်ပါ	
၈	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများကို ကျန်းမာရေးဆိုင်ရာ ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား		
၉	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်အခွင့်အလမ်းများကို အနှောင့်အယှက်ဖြစ်စေပါသလား	မဖြစ်နိုင်	

Signature (လက်မှတ်).....
 Name (အမည်)..... ဦး ကံသွန်း

Address (နေရပ်လိပ်စာ).....
 ကမကန်ကျွန်း နှင့် ကိုဝိကျွန်း



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Stakeholders Consultation Questionnaire

အမည်: ဦးကျော်သက်အုန်း စီမံကိန်းအမည်: HOTEL RESORT
 နေ့စွဲ: ၁၁.၅.၂၀၁၉

မေးမြန်းသည့်နေရာ (သို့) ဖြေဆိုသည့်နေရာ.....

စဉ်	Environmental and Social Impacts ပတ်ဝန်းကျင်နှင့်လူမှုစီးပွားရေးအပေါ်ထိခိုက်မှုများ	(Yes/ NO) ဖြစ်နိုင်/ မဖြစ်နိုင်	Comments on Project ထင်မြင်ချက်
၁	ယခုစီမံကိန်းသည် ပတ်ဝန်းကျင်နေထိုင်သူများအတွက် ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	မဖြစ်နိုင်	ပြင်ပအကျိုးထွက်များ ရေးသားနိုင်ပါသည် ခရီး: ချွား၊ ယျှပ်ငန်း၊ များ ဆိုး: အက်ဖျက်ခြင်း၊ လာ ဖြီး ဖြိုးနယ် စဉ်ကား၊ အခိုင်ခံ့
၂	ယခုစီမံကိန်းကြောင့် အနီးအနားပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်များကို ထိခိုက်နိုင်ပါသလား	မဖြစ်နိုင်	
၃	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝအရင်းအမြစ်များကို ထိခိုက်နိုင်ပါသလား	မဖြစ်နိုင်	
၄	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝ ပတ်ဝန်းကျင်ကို ထိခိုက်နိုင်ပါသလား	မဖြစ်နိုင်	
၅	ယခုစီမံကိန်းကြောင့် အသံဆူညံမှု၊ တုန်ခါမှု၊ များ ဖြစ်နိုင်ပါသလား	မဖြစ်နိုင်	
၆	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ လူမှုစီးပွားရေး ပိုမိုကောင်းမွန်လာနိုင်ပါသလား	ဖြစ်နိုင်	
၇	ယခုစီမံကိန်းကြောင့် သယ်ယူပို့ဆောင်ရေးလမ်းကြောင်း သို့မဟုတ် အထောက်အကူပြုလုပ်ငန်းအဆောက်အအုံများကို ပိုမို ဖြတ်သိပ် ကြပ်သွားနိုင်ပါသလား	မဖြစ်နိုင်	
၈	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများကို ကျန်းမာရေးဆိုင်ရာ ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	မဖြစ်နိုင်	
၉	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်အခွင့်အလမ်းများကို အနှောင့်အယှက်ဖြစ်စေပါသလား	မဖြစ်နိုင်	

Signature (လက်မှတ်)
 Name (အမည်)
 Address (နေရပ်လိပ်စာ)



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Stakeholders Consultation Questionnaire

အမည်..... ကိုသန်းလင် စီမံကိန်းအမည်..... စတုရန်းကျွန်း နှင့် ဝါးဒါးကျွန်း မော်ဂျီ Hotol Resort မြေပုံများ နေ့စွဲ..... 1.3.5.2019

မေးမြန်းသည့်နေရာ (သို့) ဖြေဆိုသည့်နေရာ..... ဝါးဒါးကျွန်း

စဉ်	Environmental and Social Impacts ပတ်ဝန်းကျင်နှင့် လူမှုစီးပွားရေးအပေါ် ထိခိုက်မှုများ	(Yes/ NO) ဖြစ်နိုင်/ မဖြစ်နိုင်	Comments on Project ထင်မြင်ချက်
၁	ယခုစီမံကိန်းသည် ပတ်ဝန်းကျင်နေထိုင်သူများအတွက် ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	-	ခြားစွဲအကြီးအကျယ်များ ရေးသားနိုင်ပါသည်
၂	ယခုစီမံကိန်းကြောင့် အနီးအနားပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်များကို ထိခိုက်နိုင်ပါသလား	ထိခိုက်နိုင်	ကော့စတာစ်ဇွဲ၊ ပေါ်ခရီးသွား
၃	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝအရင်းအမြစ်များကို ထိခိုက်နိုင်ပါသလား	ထိခိုက်နိုင်	
၄	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝ ပတ်ဝန်းကျင်ကို ထိခိုက်နိုင်ပါသလား	-	ရုပ်ပုံအကျိုးအကျိုး
၅	ယခုစီမံကိန်းကြောင့် အသံဆူညံမှု၊ တုန်ခါမှု၊ များ ဖြစ်နိုင်ပါသလား	ဖြစ်နိုင်	ဖြူနိုင်ပါသလား
၆	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ လူမှုစီးပွားရေး ပိုမိုကောင်းမွန်လာနိုင်ပါသလား	မဖြစ်နိုင်	ဇွဲတွင်း၊ ခရီးသည်
၇	ယခုစီမံကိန်းကြောင့် သယ်ယူပို့ဆောင်ရေးလမ်းကြောင်း သို့မဟုတ် အထောက်အကူပြုလုပ်ငန်းအဆောက်အအုံများကို ပိုမို ပြုတ်သိမ် ကြပ်သွားနိုင်ပါသလား	-	များ သွားကား မှု
၈	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများကို ကျန်းမာရေးဆိုင်ရာ ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	-	ရှိပါသလား
၉	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်အခွင့်အလမ်းများကို အနှောင့်အယှက်ဖြစ်စေပါသလား	ဖြစ်နိုင်	သိချင်ပါသည်

Signature (လက်မှတ်).....
 Name (အမည်)..... ကိုသန်းလင်
 Address (နေရပ်လိပ်စာ)..... စတုရန်းကျွန်း မော်ဂျီ Hotol Resort No. 472
 မြောက်-ဧရာ ကော့စတာစ်ဇွဲ



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Stakeholders Consultation Questionnaire

အမည် စိုးစိုင်းလက် စီမံကိန်းအမည် Hotel Resort Project
 နေ့စွဲ ၂၃.၅.၁၉

မေးမြန်းသည့်နေရာ (သို့) ဖြေဆိုသည့်နေရာ.....

စဉ်	Environmental and Social Impacts ပတ်ဝန်းကျင်နှင့်လူမှုစီးပွားရေးအပေါ်ထိခိုက်မှုများ	(Yes/ NO) ဖြစ်နိုင်/ မဖြစ်နိုင်	Comments on Project ထင်မြင်ချက်
၁	ယခုစီမံကိန်းသည် ပတ်ဝန်းကျင်နေထိုင်သူများအတွက် ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	No.	ခြေခံအခြေခံများ ရေးသားနိုင်ပါသည်
၂	ယခုစီမံကိန်းကြောင့် အနီးအနားပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်များကို ထိခိုက်နိုင်ပါသလား	No.	ပြည်သူများ အထုပ်ကို ခွင့်လမ်းများ ရှိလာ ခြင်း၊ မြို့ရဲ့ ဂုဏ်ကို လည်း တိုးတက်စေပြီး ခရီးသွားလုပ်ငန်းများ လည်း ပိုမိုတွင်ကျယ် လာစေပြီး ဖြစ်ရမည် အားဖြည့်အပ်ပါသည်။
၃	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝအရင်းအမြစ်များကို ထိခိုက်နိုင်ပါသလား	No.	
၄	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝ ပတ်ဝန်းကျင်ကို ထိခိုက်နိုင်ပါသလား	No.	
၅	ယခုစီမံကိန်းကြောင့် အသံဆူညံမှု၊ တုန်ခါမှု၊ များ ဖြစ်နိုင်ပါသလား	No.	
၆	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ လူမှုစီးပွားရေး ပိုမိုကောင်းမွန်လာနိုင်ပါသလား	Yes.	
၇	ယခုစီမံကိန်းကြောင့် သယ်ယူပို့ဆောင်ရေးလမ်းကြောင်း သို့မဟုတ် အထောက်အကူပြုလုပ်ငန်းအဆောက်အအုံများကို ပိုမို မြှုပ်ထိပ် ကြပ်သွားနိုင်ပါသလား	No.	
၈	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများကို ကျန်းမာရေးဆိုင်ရာ ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	No.	
၉	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်အခွင့်အလမ်းများကို အနှောင့်အယှက်ဖြစ်စေပါသလား	No.	

Signature (လက်မှတ်) Haing
 Name (အမည်) စိုးစိုင်းလက်
 Address (နေရပ်လိပ်စာ) မိတ္ထီလာမြို့နယ်၊ ဇွန်လမ်း၊ ကော့ဘောက်မြို့



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စီမံကိန်းအမည် Hotel Resort Project
 မြို့နယ် ကော့လောင်း

အကြံပြုချက်များ ရှိပါက ရင်းနှီးပွင့်လင်းစွာ ရေးသားအကြံပေးစေလိုပါသည်။

ရက်စွဲ ၁၃.၇.၁၉

စဉ်	အကြံပြုချက်
	<p>မြို့နေပြည်သူများ အလုပ်ကိုင်အဖွဲ့အစည်းများ ဝင်ရောက်လာပြီး ဟိုထပ်နှင့် ဆိုင်းဘုတ်ထပ်များလည်း ပိုမိုကွယ်ပြန်လာမည်ဟု အကြံပြုပါသည်။</p>

လက်မှတ် Hing
 အမည် ဦးအောင်
 ဆက်သွယ်ရန်လိပ်စာ ကော့လောင်းမြို့
 ဖုန်းနံပါတ်



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အမည် ဦးကျော်စန်း Stakeholders Consultation Questionnaire
 စီမံကိန်းအမည် Hotel Resort မြင်ကွင်းစွဲတည်ဆောက်ရေး
 နေ့စွဲ 13.5.2019

မေးမြန်းသည့်နေရာ (သို့) ဖြေဆိုသည့်နေရာ.....

စဉ်	Environmental and Social Impacts ပတ်ဝန်းကျင်နှင့် လူမှုစီးပွားရေးအပေါ် ထိခိုက်မှုများ	(Yes/ NO) ဖြစ်နိုင်/ မဖြစ်နိုင်	Comments on Project ထင်မြင်ချက်
၁	ယခုစီမံကိန်းသည် ပတ်ဝန်းကျင်နေထိုင်သူများအတွက် ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	No	ခြားနားအကြီးအကျယ်များ ရေးသားနိုင်ပါသည်
၂	ယခုစီမံကိန်းကြောင့် အနီးအနားပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်များကို ထိခိုက်နိုင်ပါသလား	No	
၃	ယခုစီမံကိန်းကြောင့် ကျွန်ုပ်တို့၏ သဘာဝအရင်းအမြစ်များကို ထိခိုက်နိုင်ပါသလား	No	
၄	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝ ပတ်ဝန်းကျင်ကို ထိခိုက်နိုင်ပါသလား	No	
၅	ယခုစီမံကိန်းကြောင့် အသံဆူညံမှု၊ တုန်ခါမှု၊ များ ဖြစ်နိုင်ပါသလား	No	
၆	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ လူမှုစီးပွားရေး ပိုမိုကောင်းမွန်လာနိုင်ပါသလား	Yes	
၇	ယခုစီမံကိန်းကြောင့် သယ်ယူပို့ဆောင်ရေးလမ်းကြောင်း သို့မဟုတ် အထောက်အကူပြုလုပ်ငန်းအဆောက်အအုံများကို ပိုမို ဖြတ်သိမ်း ကြပ်သွားနိုင်ပါသလား	No	
၈	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများကို ကျန်းမာရေးဆိုင်ရာ ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	No	
၉	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်အခွင့်အလမ်းများကို အနှောင့်အယှက်ဖြစ်စေပါသလား		

Signature (လက်မှတ်) ဦးကျော်စန်း
 Name (အမည်) ဦးကျော်စန်း
 Address (နေရပ်လိပ်စာ) “ကျေးရွာသာ” တာဆင်၊ ချီခင်း၊ ကေး၊ ငါးပြင်မြို့နယ်၊ ရန်ကင်းမြို့



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Stakeholders Consultation Questionnaire

အမည်..... ဦးအောင်ကျော်..... စီမံကိန်းအမည်..... ဘေဝီကျွန်းကျွန်းပျံ့ကျွန်းပျံ့ဆန်း
ဘေဝီကျွန်းကျွန်းပျံ့ကျွန်းပျံ့ဆန်း Hotel Resort နေ့စွဲ..... 12.5.2019
 မေးမြန်းသည့်နေရာ (သို့) ဖြေဆိုသည့်နေရာ..... Landan Hotel

စဉ်	Environmental and Social Impacts ပတ်ဝန်းကျင်နှင့်လူမှုစီးပွားရေးအပေါ်ထိခိုက်မှုများ	(Yes/ NO) ဖြစ်နိုင်/ မဖြစ်နိုင်	Comments on Project ထင်မြင်ချက်
၁	ယခုစီမံကိန်းသည် ပတ်ဝန်းကျင်နေထိုင်သူများအတွက် ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	No	ဒေသထဲမှာ အကျွန်ုပ်တို့ အဖွဲ့က အကြံပြုချက်များ ရေးသားနိုင်ပါသည်။
၂	ယခုစီမံကိန်းကြောင့် အနီးအနားပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်များကို ထိခိုက်နိုင်ပါသလား	No	
၃	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝအရင်းအမြစ်များကို ထိခိုက်နိုင်ပါသလား	No	
၄	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝ ပတ်ဝန်းကျင်ကို ထိခိုက်နိုင်ပါသလား	No	
၅	ယခုစီမံကိန်းကြောင့် အသံဆူညံမှု၊ တုန်ခါမှု၊ များ ဖြစ်နိုင်ပါသလား	No	
၆	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ လူမှုစီးပွားရေး ပိုမိုကောင်းမွန်လာနိုင်ပါသလား	Yes	
၇	ယခုစီမံကိန်းကြောင့် သယ်ယူပို့ဆောင်ရေးလမ်းကြောင်း သို့မဟုတ် အထောက်အကူပြုလုပ်ငန်းအဆောက်အအုံများကို ပိုမို ဖြတ်သိမ်း ကြပ်သွားနိုင်ပါသလား	No	
၈	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများကို ကျန်းမာရေးဆိုင်ရာ ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	No	
၉	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်အခွင့်အလမ်းများကို အနှောင့်အယှက်ဖြစ်စေပါသလား		

Signature (လက်မှတ်)..... [Signature]
 Name (အမည်)..... ဦးအောင်ကျော်
 Address (နေရပ်လိပ်စာ)..... (✓) မြို့ရပ်စား: ၆၇၂၊ အင်းစိန်မြို့နယ်၊ ရန်ကင်းမြို့နယ်၊ ရန်ကင်းမြို့



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Stakeholders Consultation Questionnaire

အမည်..... ကျ် မောင်ကျော်ကျော်..... စီမံကိန်းအမည်..... ဝေဟန်ကျွန်းအိမ်ခြံမြေဖွံ့ဖြိုးရေး Hotel Resort
 နေ့စွဲ..... ၁၇.၆.၁၉.၂၀၁၉.....

မေးမြန်းသည့်နေရာ (သို့) ဖြေဆိုသည့်နေရာ.....

စဉ်	Environmental and Social Impacts ပတ်ဝန်းကျင်နှင့်လူမှုပတ်ဝန်းကျင်အပေါ်ထိခိုက်မှုများ	(Yes/ NO) ဖြစ်နိုင်/ မဖြစ်နိုင်	Comments on Project ထပ်ပြင်ချက်
၁	ယခုစီမံကိန်းသည် ပတ်ဝန်းကျင်နေထိုင်သူများအတွက် ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	Yes	ဖြည့်စွက်အကြံပြုချက်များ ရေးသားနိုင်ပါသည်
၂	ယခုစီမံကိန်းကြောင့် အနီးအနားပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်များကို ထိခိုက်နိုင်ပါသလား	Yes	
၃	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝအရင်းအမြစ်များကို ထိခိုက်နိုင်ပါသလား	Yes	
၄	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ သဘာဝ ပတ်ဝန်းကျင်ကို ထိခိုက်နိုင်ပါသလား	Yes	
၅	ယခုစီမံကိန်းကြောင့် အသံဆူညံမှု၊ တုန်ခါမှု များ ဖြစ်နိုင်ပါသလား	No	
၆	ယခုစီမံကိန်းကြောင့် ဤဒေသ၏ လူမှုပတ်ဝန်းကျင် ပိုမိုကောင်းမွန်လာနိုင်ပါသလား	Yes	
၇	ယခုစီမံကိန်းကြောင့် သယ်ယူပို့ဆောင်ရေးလမ်းကြောင်း သို့မဟုတ် အထောက်အကူပြုလုပ်ငန်းအဆောက်အအုံများကို ပိုမို ဖြတ်သိမ်း ကြပ်သွားနိုင်ပါသလား	No	
၈	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများကို ကျန်းမာရေးဆိုင်ရာ ဆိုးကျိုးများပေးနိုင်သည်ဟု ထင်ပါသလား	No	
၉	ယခုစီမံကိန်းကြောင့် ပတ်ဝန်းကျင်နေထိုင်သူများ၏ အလုပ်အကိုင်အခွင့်အလမ်းများကို အနှောင့်အယှက်ဖြစ်စေပါသလား	Yes	

Signature (လက်မှတ်)..... [Signature]
 Name (အမည်)..... Aung Kyau Kyau
 Address (နေရပ်လိပ်စာ)..... aungkyauakua@gmail.com



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စီမံကိန်းအမည် ဆေးကုသရေးနှင့် ဘိုဝိကျွန်းပေါ်ရှိ Hotel Resort နှင့်
 မြို့နယ် ကော့သောင်း

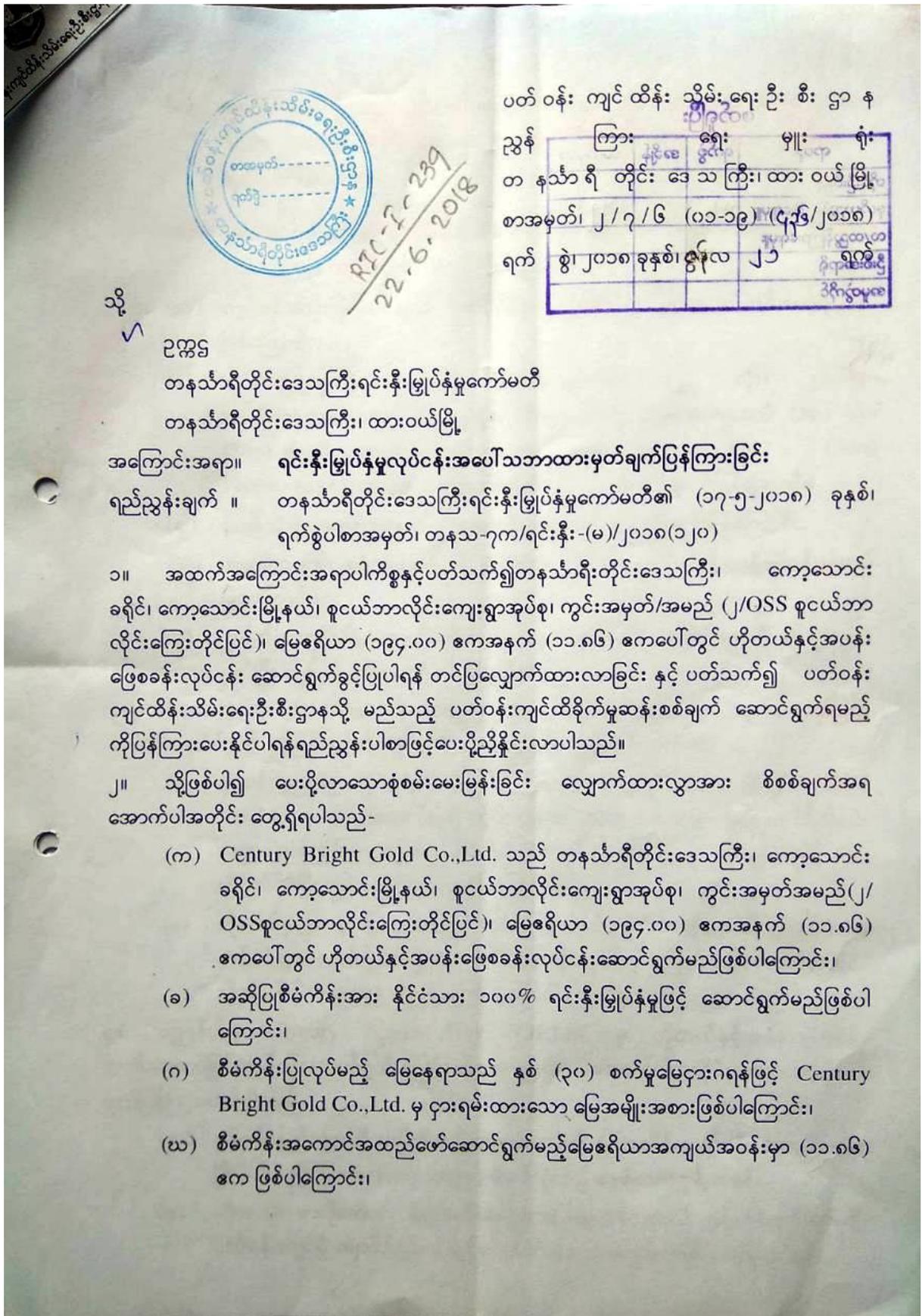
အကြံပြုချက်များ ရှိပါက ရင်းနှီးပွင့်လင်းစွာ ရေးသားအကြံပေးစေလိုပါသည်။

ရက်စွဲ။...13. 5. 2019...

စဉ်	အကြံပြုချက်
	<p>သဘာဝပတ်ဝန်းကျင် ထိခိုက်မှု မရှိစေရန် အရေးကြီးသည်။ မြေ - လှုပ်ရှားမှု (မြေဆီလျော်မှု၊ မြေဆီလျော်မှု) စင် လှုပ်ရှားမှု ချက်၊ မြေဆီလျော်မှု - မြေဆီလျော်မှု - အရေးကြီးသည်။ (* သို့မဟုတ် မြေ - စီမံကိန်း)</p>

လက်မှတ်.....
 အမည်.....
 ဆက်သွယ်ရန်လိပ်စာ.....
 ဖုန်းနံပါတ်.....

APPENDIX II



J

- (င) အဆိုပြုစီမံကိန်းသည် ဟိုတယ်အခန်း(၇၂)ခန်း၊ Panorama Swimming Pool Villa (၁၀)လုံး၊ Villa House (၁၅)လုံး၊ Boat House (၂၄)လုံး တည်ဆောက်မည်ဖြစ်ပါကြောင်း၊
- (စ) Outdoor Facility များအဖြစ် Floating Thematic Pool၊ Floating Jacuzzi Hut (၆) လုံး တည်ဆောက်မည်ဖြစ်ပါကြောင်း၊
- (ဆ) လျှပ်စစ်အသုံးပြုမှုအနေဖြင့် ကိုယ်ပိုင်မီးစက် (3KVA - ၂လုံး) တပ်ဆင်အသုံးပြုမည်ဖြစ်ကြောင်း၊
- (ဇ) အဝတ်လျှော်ဖွတ်ခြင်းအတွက် အဝတ်လျှော်စက် (၇) လုံး၊ (1.5hp) အားရှိလေအေးပေးစက် (၇၅) လုံး၊ (2hp) အားရှိ လေအေးပေးစက် (၁၀) လုံး၊ (5hp) အားရှိ လေအေးပေးစက်(၄) လုံး ၊ ရေခဲသေတ္တာအလုံး (၈၀) ၊ Chest Freezer (၈) လုံး၊ အဝတ်အခြောက်ခံစက် (၂) လုံး အသုံးပြုမည်ဖြစ်ကြောင်း၊
- (ဈ) ရေချိုသုံးစွဲမှုအခြေအနေမှာ မြေအောက်ရေတူးဖော်အသုံးပြုမည်ဖြစ်ကြောင်း၊
- (ည) အညစ်အကြေး စွန့်ပစ်မှုအတွက် Biofilter (၂) လုံး တပ်ဆင်၍ သန့်စင်စွန့်ပစ်မည်ဖြစ်ကြောင်း၊
- (ဋ) အမှိုက်များစွန့်ပစ်မှုအတွက် ဟိုတယ်မှ ထွက်ရှိလာသော အမှိုက်များကို နေရာသတ်မှတ်ပြီး မြေမြှုပ် (သို့မဟုတ်) မီးရှို့မည်ဖြစ်ကြောင်း၊

၃။ Century Bright Gold Co.,Ltd. မှ ဟိုတယ်နှင့်အပန်းဖြေခန်း တည်ဆောက်ခြင်း လုပ်ငန်းဆောင်ရွက် လိုခြင်းနှင့်စပ်လျဉ်း၍ အောက်ပါအတိုင်းသုံးသပ်ရပါသည်-

- (က) စွန့်ပစ်ပစ္စည်းများကို စနစ်တကျစွန့်ပစ်ခြင်းမပြုပါက Century Bright Gold Co.,Ltd. မှ တည်ဆောက်မည့် ဘိုဝီးကျွန်း၏ သဘာဝအလှအပများ ပျက်စီးနိုင်ပြီး အဏ္ဏဝါညစ်ညမ်းမှုများဖြစ်ပေါ်နိုင်ပါကြောင်းနှင့်မြေအောက်ရေ အရည်အသွေးအား ထိခိုက်နိုင်ပြီး မြေထုညစ်ညမ်းမှုဖြစ်ပေါ်နိုင်ပါကြောင်း၊
- (ခ) ဟိုတယ်နှင့်အပန်းဖြေလုပ်ငန်းမှ ထွက်ရှိလာသောစွန့်ပစ်ရေဆိုးများကို စနစ်တကျ သန့်စင်ထုတ်လွှတ်ခြင်းမပြုဘဲ အနီးအနားရှိချောင်း၊ မြောင်းနှင့်ပင်လယ်အတွင်း သို့စွန့်ပစ်ပါက ရေထုညစ်ညမ်းမှုဖြစ်ပေါ်နိုင်ပါကြောင်း၊

၄။ သို့ဖြစ်ပါ၍ Century Bright Gold Co.,Ltd. မှ ဟိုတယ်နှင့်အပန်းဖြေခန်း တည်ဆောက်ခြင်းလုပ်ငန်းဆောင်ရွက်လိုခြင်းနှင့်စပ်လျဉ်း၍ အောက်ပါအတိုင်းသဘောထားမှတ်ချက်ပြန်ကြားအပ်ပါသည်-

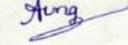
- (က) စွန့်ပစ်ပစ္စည်းများကို အမှိုက်အမျိုးအစားအလိုက် ခွဲခြားသိမ်းဆည်းပြီး ကော့သောင်း မြို့နယ် စည်ပင်သာယာရေးအဖွဲ့ဖြင့် ဆက်သွယ်၍ စနစ်တကျစွန့်ပစ်ရန်၊
- (ခ) ဟိုတယ်၊ စားဖိုဆောင်၊ မိလ္လာနှင့်ရေကူးကန်မှထွက်ရှိလာမည့် စွန့်ပစ်ရေဆိုးများကို ပတ်ဝန်းကျင်ရှိ ချောင်း၊ မြောင်းနှင့်ပင်လယ်အတွင်း သို့စွန့်ပစ်ခြင်း မပြုလုပ်ရန်၊

- (ဂ) တည်ဆောက်ရေးလုပ်ငန်းများအတွက် မြေနေရာရှင်းလင်းရာတွင်သဘာဝအတိုင်း ပေါက်ရောက်လျက်ရှိသော သစ်တောသစ်ပင် ခုတ်ထွင်ရှင်းလင်းခြင်းများအားတတ် နိုင်သမျှရှောင်ရှား ဆောင်ရွက်ရန်၊
- (ဃ) ဟိုတယ်နှင့်အပန်းဖြေစခန်းလုပ်ငန်း တိုးချဲ့လုပ်ကိုင်မည်ဆိုပါက ပတ်ဝန်းကျင်ထိန်း သိမ်းရေးဦးစီးဌာန၏ သဘောထားမှတ်ချက်ရယူရန်၊
- (င) ဟိုတယ်နှင့်စားသောက်ဆိုင်လုပ်ငန်းများမှ ထွက်ရှိလာမည့် ရေဆိုးများအတွက် Biofilter နည်းစနစ်တပ်ဆင်အသုံးပြုရန်၊
- (စ) အဆိုပြုလာသည့် Century Bright Gold Co.,Ltd. မှ ဟိုတယ်နှင့် စားသောက်ဆိုင်လုပ်ငန်းသည် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း ဆိုင်ရာလုပ်ထုံး လုပ်နည်း၊ နောက်ဆက်တွဲ (က)၊ အမှတ်စဉ် (၁၂၁) အရ ဟိုတယ် နှင့် ခရီးသွားဖွံ့ဖြိုး ရေးလုပ်ငန်းတွင် “ အခန်း (၈၀)နှင့်အထက်၊ အခန်း (၂၀၀) အောက် (သို့မဟုတ်) အသုံးပြု ဧရိယာ စတုရန်းမီတာ (၂၀၀၀၀၀) နှင့် အထက်၊ စတုရန်းမီတာ (၅၀၀၀၀၀) အောက် ” ဖြစ်ပါက ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း (Initial Environmental Examination-IEE) ဆောင်ရွက်ရန်၊
- (ဆ) အဆိုပြုလုပ်ငန်းများကြောင့် ဖြစ်ပေါ်လာနိုင်သည့် ပတ်ဝန်းကျင်၊ လူမှုရေးနှင့် ကျန်း မာရေးထိခိုက်ပျက်စီးမှုများကို လျော့နည်းစေရန်အတွက် လုပ်ငန်းဆိုင်ရာအချက် အလက်များကို ပြည့်စုံစွာဖော်ပြပြီး လုပ်ငန်းဆောင်ရွက်ရာတွင် ပတ်ဝန်းကျင်ထိခိုက် မှုအနည်းဆုံးဖြစ်စေမည့်နည်းစနစ်များအား အသုံးပြုရန်နှင့် လူမှုရေးဆိုင်ရာအကျိုး ပြုလုပ်ငန်းများတာဝန်ခံဆောင်ရွက်မှု (Corporate Social Responsibility-CSR) အတွက် အသားတင်အမြတ်ငွေ၏ (၂ %) အား အသုံးပြုခြင်းအား လိုက်နာအကောင် အထည်ဖော်ဆောင်ရွက်ရန်၊
- (ဇ) ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဥပဒေ ပုဒ်မ ၁၄ အရ ညစ်ညမ်းမှုကိုစတင်ဖြစ်ပေါ်စေသူ သည် ပတ်ဝန်းကျင်တွင်ညစ်ညမ်းမှုကိုဖြစ်စေသည့် ပစ္စည်းများကိုသတ်မှတ်ထားသည့် ပတ်ဝန်းကျင်အရည်အသွေး စံချိန်စံညွှန်းများနှင့်အညီ သတ်မှတ်ချက်များအတိုင်း သန့်စင်ခြင်း၊ ထုတ်လွှတ်ခြင်း၊ စွန့်ပစ်ခြင်းနှင့်စုပုံခြင်းများ ပြုလုပ်ရန်၊
- (ဈ) ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဥပဒေ ပုဒ်မ ၁၅ အရ ညစ်ညမ်းမှုကိုစတင်ဖြစ်ပေါ် စေသည့်လုပ်ငန်း၊ ပစ္စည်း သို့မဟုတ် နေရာတစ်ခုခု၏ပိုင်ရှင် သို့မဟုတ် လက်ရှိဖြစ် သူသည် ပတ်ဝန်းကျင်ညစ်ညမ်းမှု များကို စောင့်ကြပ်ကြည့်ရှုရန်၊ ထိန်းချုပ်ရန်၊ စီမံ ခန့်ခွဲရန်၊ လျော့ချရန် သို့မဟုတ် ပပျောက်စေရန် လုပ်ငန်းခွင်အထောက်အကူပြု ပစ္စည်း သို့မဟုတ် ထိန်းချုပ်ရေးပစ္စည်းကိရိယာကို တပ်ဆင်ခြင်း သို့မဟုတ် သုံးစွဲ ခြင်းပြုရမည်။ ယင်းသို့ ဆောင်ရွက်ခြင်းမပြုနိုင်ပါက စွန့်ပစ်ပစ္စည်းများအား ပတ်ဝန်းကျင်ကို မထိခိုက်စေသောနည်း လမ်းများနှင့်အညီစွန့်ပစ်နိုင်ရန် စီစဉ်ဆောင် ရွက်ရန်၊

၄

- (ည) ပြဋ္ဌာန်းထားသည့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဥပဒေ၊ နည်းဥပဒေများ၊ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး(ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ၊ စည်းမျဉ်းစည်းကမ်းများနှင့် အညီလိုက်နာဆောင်ရွက်ရန်၊
- (ဋ) သက်ဆိုင်ရာ တိုင်းဒေသကြီးအစိုးရအဖွဲ့၏ ကြီးကြပ်ကွပ်ကဲမှုဖြင့် ဒေသခံပြည်သူများ၏ ဆန္ဒနှင့်သဘောထားများ ရယူဆောင်ရွက်ရန်၊


တာဝန်ခံအရာရှိ

(ထွန်းထွန်းဦး-၁၊လက်ထောက်ညွှန်ကြားရေးမှူး၊)
  

မိတ္ထူကို

ဝန်ကြီး(သယံဇာတနှင့်ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး)၊ တနင်္သာရီတိုင်းဒေသကြီးအစိုးရအဖွဲ့
ညွှန်ကြားရေးမှူးချုပ်၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ နေပြည်တော်
ညွှန်ကြားရေးမှူး၊ ဟိုတယ်နှင့်ခရီးသွားညွှန်ကြားမှုဦးစီးဌာန၊ တနင်္သာရီတိုင်းဒေသကြီး၊
Century Bright Gold Co.,Ltd.၊ စူငယ်ဘာလိုင်ကျေးရွာ၊ ကော့သောင်းမြို့နယ်
ရုံးလက်ခံ
မျှောစာတွဲ

ခ ရိုင် အုပ်ချုပ်ရေးမှူးရုံး
(အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာန)
ကော့သောင်းခရိုင် - ကော့သောင်းမြို့
စာအမှတ် ၅၇၇၃ / ၈၀၀(၁) / ၆ - ၂ / ခရအ
ရက်စွဲ ၂၀၁၈ခုနှစ်၊ ဩဂုတ်လ ၂၄ ရက်

သို့
တိုင်းဒေသကြီးအစိုးရအဖွဲ့
တနင်္သာရီတိုင်းဒေသကြီး၊ ထားဝယ်မြို့

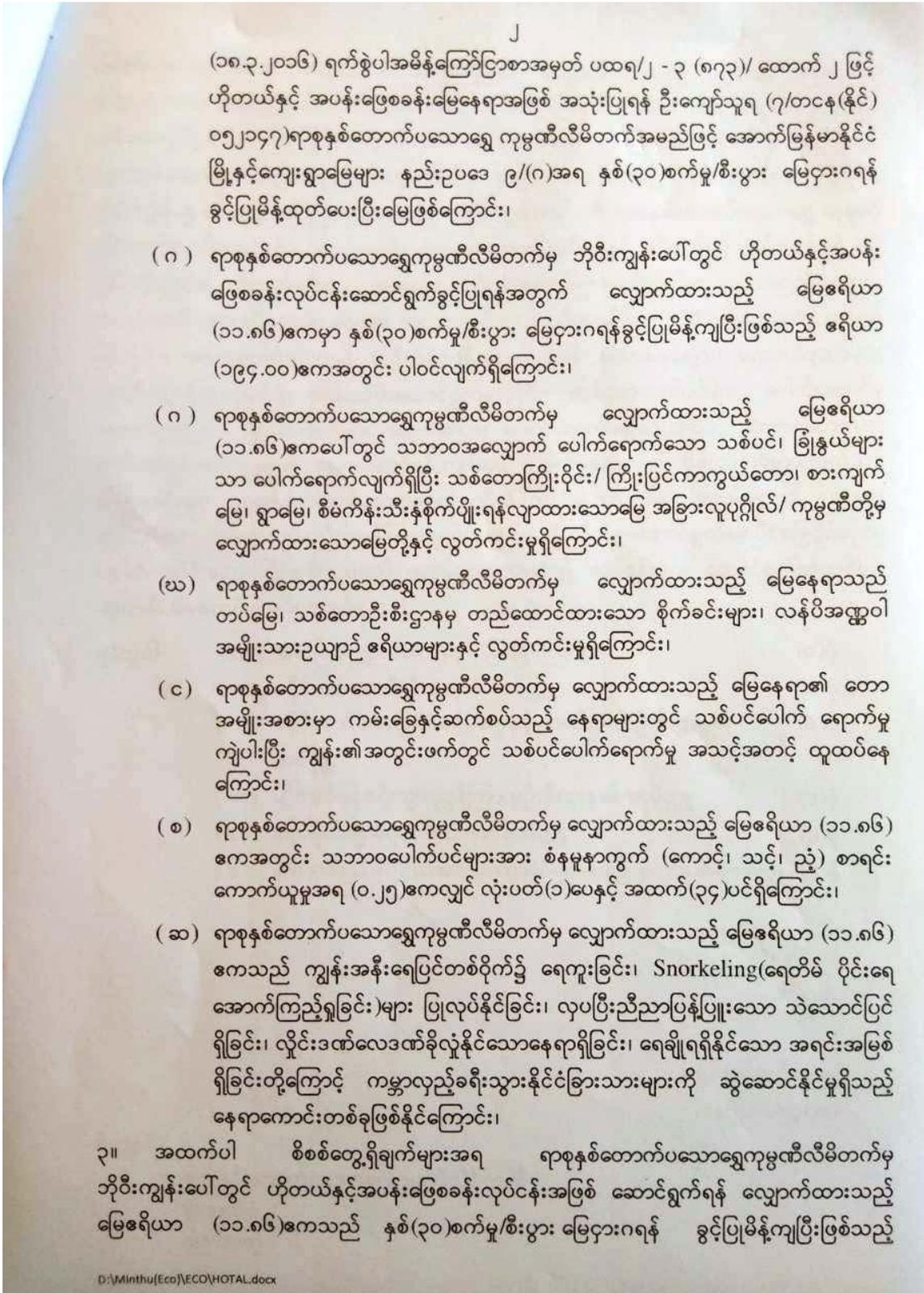
အကြောင်းအရာ။ သဘောထားမှတ်ချက်ပေးပို့အစီရင်ခံတင်ပြခြင်း
ရည်ညွှန်းချက်။ တနင်္သာရီတိုင်းဒေသကြီးအစိုးရအဖွဲ့၊ ထားဝယ်မြို့၏ ၂၉-၅-၂၀၁၈ ရက်စွဲပါ
စာအမှတ်၊ ၄၀၃၅ / ၅၀၀(၃) / ၄ - ၁ / အဖရ(တနင်္သာရီ)

၁။ တနင်္သာရီတိုင်းဒေသကြီး၊ ကော့သောင်းခရိုင်၊ ကော့သောင်းမြို့နယ်၊ စူဠာဘာလှိုင်းကျေးရွာ
အုပ်စု၊ ကွင်းအမှတ်(၂/ OSS)၊ (စူဠာဘာလှိုင်းကြေးတိုင်ပြင်)ရှိ မြေပုံညွှန်းအမှတ်၊ A-844457, B-
844461, C-846460, D-845457 ရှိ မြေဧရိယာ(၁၁.၈၆)ဧကပေါ်တွင် ဟိုတယ်နှင့် စားသောက်ဆိုင်
လုပ်ငန်းဆောင်ရွက်ခွင့်ပြုရန် ရာစုနှစ်တောက်ပသောရွှေကုမ္ပဏီလီမိတက်မှ တင်ပြလာမှုအပေါ်
မြေရာဇဝင်၊ မြေပုံများ၊ ပတ်ဝန်းကျင်ပြည့်သူများ၏ သဘောထားများ၊ ကော်မတီ၏ သုံးသပ်တင်ပြ
ချက်၊ ကော်မတီတွင် ပါဝင်သော သက်ဆိုင်ရာဌာနများ၏ သုံးသပ်တင်ပြချက်နှင့် လိုအပ်သော
အထောက်အထားများအားပြည့်စုံစွာစစ်စစ်၍ ပြန်လည်တင်ပြရန် ရည်ညွှန်းပါစာဖြင့် အကြောင်းကြား
လာပါသည်။

၂။ ရာစုနှစ်တောက်ပသောရွှေကုမ္ပဏီလီမိတက်မှ ဟိုတယ်နှင့်စားသောက်ဆိုင် လုပ်ငန်းဆောင်ရွက်
ခွင့်ပြုရန် အဆိုပြုလာသော မြေနေရာနှင့်စပ်လျဉ်း၍ ခရိုင်အုပ်ချုပ်ရေးမှူး ဦးဆောင်မှုဖြင့် ခရိုင်
လယ်ယာမြေစီမံခန့်ခွဲရေးနှင့်စာရင်းအင်းဦးစီးဌာန၊ ဟိုတယ်နှင့်ခရီးသွားညွှန်ကြားမှုဦးစီးဌာန၊ ခရိုင်
စိုက်ပျိုးရေးဦးစီးဌာန၊ ခရိုင်သစ်တောဦးစီးဌာန၊ ဒုတိယမြို့နယ်အုပ်ချုပ်ရေးမှူးနှင့် ရာစုနှစ်
တောက်ပသောရွှေကုမ္ပဏီလီမိတက်မှ မန်နေဂျာ ဦးအောင်မင်းကျော်တို့နှင့်အတူ(၂၁.၇.၂၀၁၈)
ရက်နေ့တွင် ကွင်းဆင်းစစ်ဆေးခဲ့ရာ စစ်ဆေးတွေ့ရှိချက်များမှာ အောက်ပါအတိုင်းဖြစ်ပါသည်-

- (က) ရာစုနှစ်တောက်ပသောရွှေကုမ္ပဏီလီမိတက်မှ ဘိုဝီးကျွန်းရှိ မြေဧရိယာ(၁၉၄.၀၀)ဧက
အနက် (၁၁.၈၆)ဧကပေါ်တွင် ဟိုတယ်နှင့်စားသောက်ဆိုင်လုပ်ငန်းဆောင်ရွက်ရန်
လျှောက်ထားသော မြေဧရိယာ(၁၁.၈၆)ဧကသည် မြေပုံညွှန်းအမှတ်၊ မြေပုံညွှန်းအမှတ်၊
A-844457, B - 844461, C - 846460, D - 845457 တို့ဖြစ်ပြီး မြေဧရိယာ
(၁၁.၈၆)ဧကရှိကြောင်း၊
- (ခ) ကော့သောင်းမြို့နယ်၊ စူဠာဘာလှိုင်းကျေးရွာအုပ်စု၊ ကွင်းအမှတ်(၂/OSS)၊ (စူဠာ
ဘာလှိုင်းကြေးတိုင်ပြင်)ရှိ မြေဧရိယာ(၁၉၄.၀၀)ဧကမှာ ပြည်ထဲရေးဝန်ကြီးဌာန၏

D:\Minthu(Eco)\ECO\HOTAL.docx



၂
(၁၈.၃.၂၀၁၆) ရက်စွဲပါအမိန့်ကြော်ငြာစာအမှတ် ပထရ/၂ - ၃ (၈၇၃)/ ထောက် ၂ ဖြင့် ဟိုတယ်နှင့် အပန်းဖြေစခန်းမြေနေရာအဖြစ် အသုံးပြုရန် ဦးကျော်သူရ (၇/တငန(နိုင်) ၀၅၂၁၄၇)ရာစုနှစ်တောက်ပသောရွှေ ကုမ္ပဏီလီမိတက်အမည်ဖြင့် အောက်မြန်မာနိုင်ငံ မြို့နှင့်ကျေးရွာမြေများ နည်းဥပဒေ ၉/(ဂ)အရ နှစ်(၃၀)စက်မှု/စီးပွား မြေငှားဂရန် ခွင့်ပြုမိန့်ထုတ်ပေးပြီးမြေဖြစ်ကြောင်း၊

- (ဂ) ရာစုနှစ်တောက်ပသောရွှေကုမ္ပဏီလီမိတက်မှ ဘိုဝီးကျွန်းပေါ်တွင် ဟိုတယ်နှင့်အပန်းဖြေစခန်းလုပ်ငန်းဆောင်ရွက်ခွင့်ပြုရန်အတွက် လျှောက်ထားသည့် မြေဧရိယာ (၁၁.၈၆)ဧကမှာ နှစ်(၃၀)စက်မှု/စီးပွား မြေငှားဂရန်ခွင့်ပြုမိန့်ကျပြီးဖြစ်သည့် ဧရိယာ (၁၉၄.၀၀)ဧကအတွင်း ပါဝင်လျက်ရှိကြောင်း၊
- (ဂ) ရာစုနှစ်တောက်ပသောရွှေကုမ္ပဏီလီမိတက်မှ လျှောက်ထားသည့် မြေဧရိယာ (၁၁.၈၆)ဧကပေါ်တွင် သဘာဝအလျှောက် ပေါက်ရောက်သော သစ်ပင်၊ ခြံနွယ်များသာ ပေါက်ရောက်လျက်ရှိပြီး သစ်တောကြီးပိုင်/ ကြီးပြင်ကာကွယ်တော၊ စားကျက်မြေ၊ ရွာမြေ၊ စီမံကိန်းသီးနှံစိုက်ပျိုးရန်လျာထားသောမြေ အခြားလူပုဂ္ဂိုလ်/ ကုမ္ပဏီတို့မှ လျှောက်ထားသောမြေတို့နှင့် လွတ်ကင်းမှုရှိကြောင်း၊
- (ဃ) ရာစုနှစ်တောက်ပသောရွှေကုမ္ပဏီလီမိတက်မှ လျှောက်ထားသည့် မြေနေရာသည် တပ်မြေ၊ သစ်တောဦးစီးဌာနမှ တည်ထောင်ထားသော စိုက်ခင်းများ၊ လန်ပိအက္ကဝါ အမျိုးသားဥယျာဉ် ဧရိယာများနှင့် လွတ်ကင်းမှုရှိကြောင်း၊
- (င) ရာစုနှစ်တောက်ပသောရွှေကုမ္ပဏီလီမိတက်မှ လျှောက်ထားသည့် မြေနေရာ၏ တောအမျိုးအစားမှာ ကမ်းခြေနှင့်ဆက်စပ်သည့် နေရာများတွင် သစ်ပင်ပေါက် ရောက်မှု ကျွမ်းကျင်ပြီး ကျွန်း၏အတွင်းဖက်တွင် သစ်ပင်ပေါက်ရောက်မှု အသင့်အတင့် ထူထပ်နေကြောင်း၊
- (စ) ရာစုနှစ်တောက်ပသောရွှေကုမ္ပဏီလီမိတက်မှ လျှောက်ထားသည့် မြေဧရိယာ (၁၁.၈၆) ဧကအတွင်း သဘာဝပေါက်ပင်များအား စံနမူနာကွက် (ကောင့်၊ သင့်၊ ညှိ) စာရင်းကောက်ယူမှုအရ (၀.၂၅)ဧကလျှင် လုံးပတ်(၁)ပေနှင့် အထက်(၃၄)ပင်ရှိကြောင်း၊
- (ဆ) ရာစုနှစ်တောက်ပသောရွှေကုမ္ပဏီလီမိတက်မှ လျှောက်ထားသည့် မြေဧရိယာ (၁၁.၈၆) ဧကသည် ကျွန်းအနီးရေပြင်တစ်ဝိုက်၌ ရေကူးခြင်း၊ Snorkeling(ရေတိမ် ပိုင်းရေအောက်ကြည့်ရှုခြင်း)များ ပြုလုပ်နိုင်ခြင်း၊ လှပပြီးညီညာပြန်ပြူးသော သဲသောင်ပြင် ရှိခြင်း၊ လှိုင်းဒဏ်လေဒဏ်ခိုလှုံနိုင်သောနေရာရှိခြင်း၊ ရေချိုရရှိနိုင်သော အရင်းအမြစ် ရှိခြင်းတို့ကြောင့် ကမ္ဘာလှည့်ခရီးသွားနိုင်ခြင်းများကို ဆွဲဆောင်နိုင်မှုရှိသည့် နေရာကောင်းတစ်ခုဖြစ်နိုင်ကြောင်း၊

၃။ အထက်ပါ စိစစ်တွေ့ရှိချက်များအရ ရာစုနှစ်တောက်ပသောရွှေကုမ္ပဏီလီမိတက်မှ ဘိုဝီးကျွန်းပေါ်တွင် ဟိုတယ်နှင့်အပန်းဖြေစခန်းလုပ်ငန်းအဖြစ် ဆောင်ရွက်ရန် လျှောက်ထားသည့် မြေဧရိယာ (၁၁.၈၆)ဧကသည် နှစ်(၃၀)စက်မှု/စီးပွား မြေငှားဂရန် ခွင့်ပြုမိန့်ကျပြီးဖြစ်သည့်

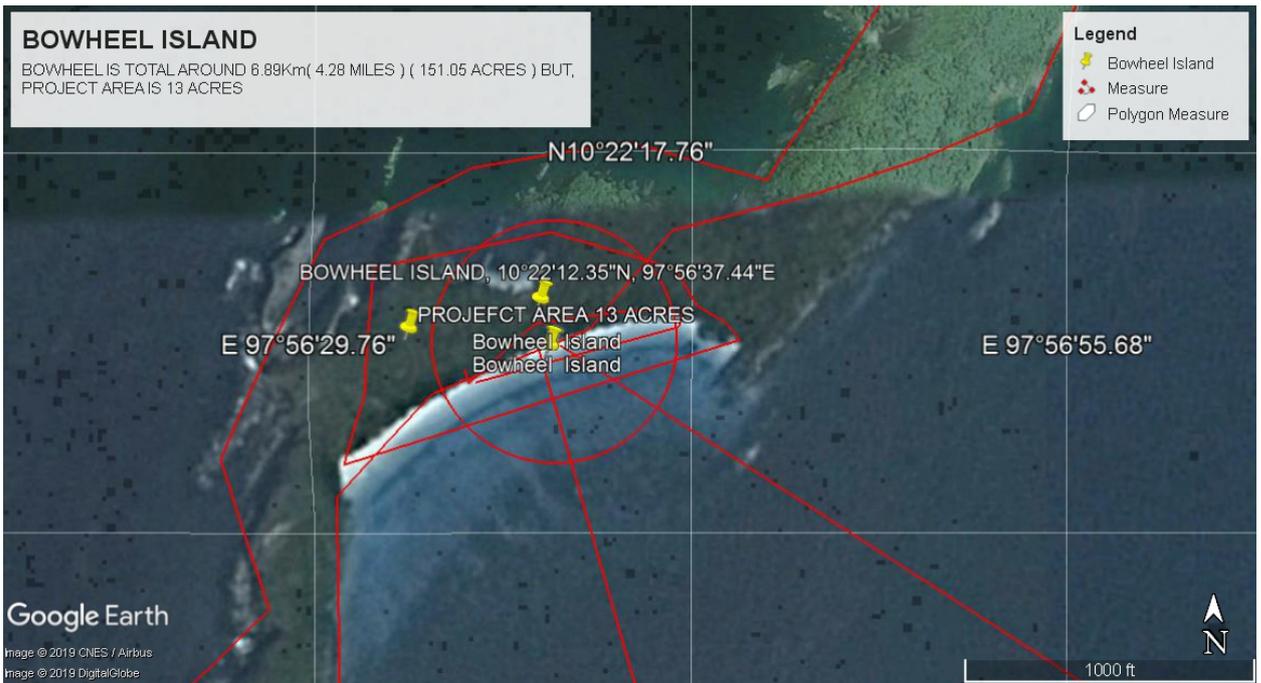
မြေဧရိယာ(၁၉၄.၀၀)ဧကအတွင်း ပါဝင်လျက်ရှိခြင်း၊ လျှောက်ထားသည့် ကျွန်း၏ မြေဧရိယာ အတွင်း သဘာဝအလျှောက်ပေါက်ရောက်သော သစ်ပင်၊ ခြံနွယ်များသာ ပေါက်ရောက်လျက်ရှိပြီး သစ်တောကြိုးဝိုင်း/ ကြိုးပြင်ကာကွယ်တော၊ စားကျက်မြေ၊ ရွာမြေ၊ စီမံကိန်းသီးနှံ စိုက်ပျိုးရန် လျာထားသောမြေ၊ အခြားလူပုဂ္ဂိုလ်/ကုမ္ပဏီတို့မှ လျှောက်ထားသောမြေတို့နှင့် လွတ်ကင်းမှုရှိခြင်း၊ ဘိုဝီးကျွန်းရှိ ကျေးရွာနေပြည်သူများမှလည်း ဘိုဝီးကျွန်းပေါ်တွင် ရာစုနှစ်တောက်ပသောရွှေ ကုမ္ပဏီ လီမိတက်မှ ဟိုတယ်နှင့်အပန်းဖြေစခန်း လုပ်ငန်းဆောင်လုပ်ရန်နှင့် စပ်လျဉ်း၍ ကန့်ကွက်ရန် မရှိ ခြင်းတို့ကြောင့် ဟိုတယ်နှင့်အပန်းဖြေစခန်း လုပ်ငန်းဆောင်ရွက်မည်ဆိုပါက ဒေသခံပြည်သူများမှ အလုပ်အကိုင်များရရှိလာပြီး ခရိုင်၏ အသားတင်ထုတ်လုပ်မှုတန်ဖိုး (GDP) မြင့်မားလာ စေမည် ဖြစ်ခြင်း၊ သဘာဝပတ်ဝန်းကျင် ထိခိုက်ပျက်စီးမှု၊ ကျွန်း၏ ဂေဟစနစ်များ၊ ရေသယံဇာတများ ပျက်စီးဆုံးရှုံးမှုမရှိစေဘဲ ထိန်းသိမ်းဆောင်ရွက်စေခြင်း၊ သစ်တောသစ်ပင်များ ပေါက်ရောက်မှု ကောင်းမွန်ခြင်း၊ မျိုးဆက်ပင်များ အများအပြား ပေါက်ရောက်နေခြင်းကြောင့် သဘာဝတောအား ခုတ်ထွင်ရှင်းလင်းမှုမရှိဘဲ သဘာဝပတ်ဝန်းကျင်အား ထိခိုက်မှုမရှိအောင် ထိန်းသိမ်းဆောင်ရွက်သင့် ပါကြောင်းနှင့် ရာစုနှစ်တောက်ပသောရွှေကုမ္ပဏီလီမိတက်မှ သက်ဆိုင်ရာဌာနများ၏ ဥပဒေ၊ နည်းဥပဒေ၊ လုပ်ထုံးလုပ်နည်း၊ ညွှန်ကြားချက်များနှင့်အညီ လိုက်နာဆောင်ရွက်စေပြီး မြေပိုင်ဆိုင်မှု မပါဘဲ တိုင်းဒေသကြီးအစိုးရအဖွဲ့သို့ အခွန်များပေးသွင်း၍ လုပ်ငန်းများ ဆောင်ရွက်စေသင့်ပါ ကြောင်း စိစစ်တင်ပြအပ်ပါသည်။

- ပူးတွဲပါ-
- (က) အဆိုပြုလျှောက်ထားနေရာပြမြေပုံကြမ်း (၁)ပုံ
 - (ခ) ခရိုင်သစ်တောဦးစီးဌာန၏ စာမိတ္တူ (၁)စုံ
 - (ဂ) ခရိုင်လယ်ယာမြေစီမံခန့်ခွဲရေးနှင့် စာရင်းအင်းဦးစီးဌာန၏ စာမိတ္တူ (၁)စုံ
 - (ဃ) ဟိုတယ်နှင့်ခရီးသွားညွှန်ကြားမှုဦးစီးဌာန၏ စာမိတ္တူ (၁)စုံ
 - (င) ခရိုင်စိုက်ပျိုးရေးဦးစီးဌာန၏ စာမိတ္တူ (၁)စုံ
 - (စ) ကော့သောင်းမြို့နယ်အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာန၏ စာမိတ္တူ (၁)စုံ

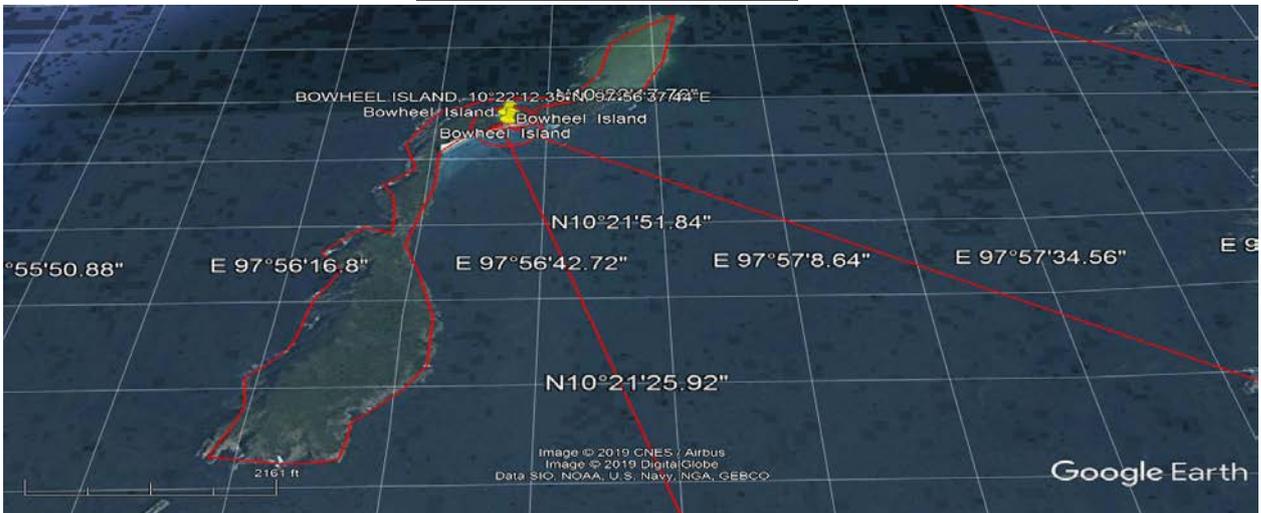

 ခရိုင်အုပ်ချုပ်ရေးမှူး
 (နေ့ဦး: ၂၀/၅/၂၀၁၈)

မိတ္တူကို-

- ✓ ရာစုနှစ်တောက်ပသောရွှေကုမ္ပဏီလီမိတက်
- ရုံးလက်ခံ
- မျှောစာတွဲ



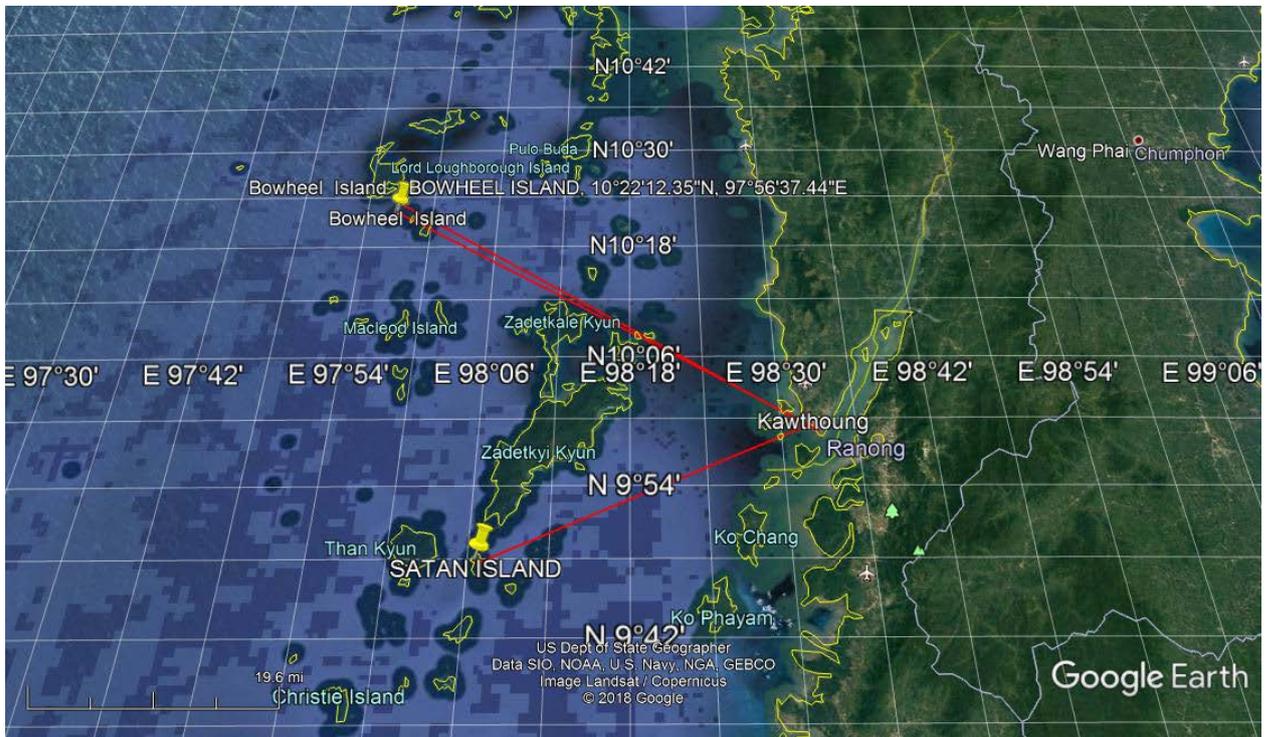
**BOWEI IS TOTAL AROUND 6.89km(4.28 MILES) (151.05 ACRES) BUT,
 PROJECT AREA IS 13 ACRES**



BOWEI ISLAND



Initial Environmental Examination (IEE) for Bo Wei Island Resort
 HRD/IEE-01-002/19 June, 2019



BOWEI ISLAND

BOWEI ISLAND IS 49.29 MILES (79.33 Km) AWAY FROM KAWTHAUNG



THE REPUBLIC OF THE UNION OF MYANMAR
Ministry of Natural Resources and Environmental Conservation
Environmental Conservation Department



CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION
 (ပြောင်းလဲရေးအကြံပေးလုပ်ကိုင်သူများကို ဝင်ရောက်စွဲဆိုခြင်းအထောက်အထားလက်မှတ်)

No. 10071 Date 24 MAY 2019

The Ministry of Natural Resources and Environmental Conservation, hereby, issues this certificate to the organization under Environmental Impact Assessment Procedure, Notification No. 616/2015

(ပတ်ဝန်းကျင် ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ငန်းစဉ်များအတွက် အဓိကပြောပြစာအမှတ် ၆၁၆/၂၀၁၅ အရ သတ်မှတ်နှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနသည် ဤအထောက်အထားလက်မှတ်ကို ထုတ်ပေးလိုက်သည်။)

(a) Name of Organization (အဖွဲ့အစည်းအမည်)	HRD Environmental Training and Services Co., Ltd
(b) Name of the representative in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏အမည်)	Dr. Aung Lay Tin
(c) Citizenship of the representative in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏နိုင်ငံသား)	Myanmar
(d) Identity Card /Passport Number of the representative person in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏ မှတ်ပုံတင်/ နိုင်ငံကူးသက်မှတ် အမှတ်)	J/ PARHATA(N) 042418
(e) Address of organization (ဆက်သွယ်ရန်လိပ်စာ)	Room 3, Bldg 2, Quarter 3, Insein Road, Myayngon Township, Yagon, Myanmar. Telephone (office): 09256036414, 09975251368 Mobile phone: 09256036414 E-mail: aunglaytin@gmail.com Organization
(f) Type of Consultancy (အကြံပေးလုပ်ကိုင်မှုအမျိုးအစား)	
(g) Duration of validity (သက်တမ်းထုတ်ပြန်ရက်)	31 December 2019



Director General
 Environmental Conservation Department
 Ministry of Natural Resources and Environmental Conservation



REPUBLIC OF THE UNION OF MYANMAR
 Ministry of Natural Resources and Environmental Conservation
 CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION
 (ဤဝန်ထမ်းကြေးစာသည် ရင်းနှီးမြှုပ်နှံမှုစနစ်ဖြင့် အဆောင်အယောင်များကို)



No. **0065** Date **11/03/18**

The Ministry of Natural Resources and Environmental Conservation, hereby, issues this certificate to the person under Environmental Impact Assessment Procedure, Notification No. 616/2015.

(ဤဝန်ထမ်းကြေးစာကို ရင်းနှီးမြှုပ်နှံမှုစနစ်ဖြင့် ဆိုင်ရာ လုပ်ကိုင်ကုန်သည်၊ အိမ်နီးချင်းပြုစောအမှုထမ်း၊ ဖွဲ့စည်း/ပေးပို့ အမှုထမ်းဆောင်မှုနှင့် အဆောင်အယောင်များကို စနစ်အရ ဝန်ထမ်းကြေးစာဖြင့် အဆောင်အယောင်များကို လုပ်ကိုင်ဆောင်ရွက်ရန်အတွက် ထုတ်ပြန်ပေးလိုက်ပါသည်။)

(a) Name of Consultant (အကြီးကုမ္ပဏီအမည်)	Dr. Aung Lay Tin
(b) Citizenship (နိုင်ငံသား)	Myanmar
(c) Identity Card / Passport Number (မှတ်ပုံတင်/နိုင်ငံရေးသင်္ဘောအမှတ်)	7/ Pa Kha Tin (N) 142418
(d) Address (ဆက်သွယ်ရန်လိပ်စာ)	No. 14 (B) YTU Campus, Uyo-Kone, Insein Township, Yangon. ang.laytin@gmail.com : 09-975851366
(e) Organization (အဖွဲ့အစည်း)	Associate Professor Mining Engineering Department Yangon Technological University
(f) Type of Consultant (အကြီးကုမ္ပဏီရင်းနှီးမြှုပ်နှံမှုအမျိုးအစား)	Person
(g) Duration of validity (ထုတ်ပြန်ပေးလိုက်သည့် အချိန်)	31 March 2018

EXTENSION
 အဆောင်အယောင်များကို

The VALIDITY of this certificate is extended for one year from (14/03/18) to (31/03/2019)
 ဤဝန်ထမ်းကြေးစာကို ၁၄ - မတ် ၂၀၁၈ ခုနှစ်မှ ၃၁ - မတ် ၂၀၁၉ ခုနှစ်အထိ အဆောင်အယောင်များကို

(Signature)
 For Minister's Orders
 (See Acting Director)
 Environmental Conservation Department

(Signature)
 Director General
 Environmental Conservation Department
 Ministry of Natural Resources and Environmental Conservation



THE REPUBLIC OF THE UNION OF MYANMAR
Ministry of Natural Resources and Environmental Conservation
Environmental Conservation Department



CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION
(ပြောင်းလဲရေးအကြံပေးကုမ္ပဏီတိုက်ရိုက်လုပ်ငန်းခြင်းအခမဲ့ထောက်ခံထုတ်ပေးရန်အတွက်)

No.0162..... Date:24 MAY 2019.....

The Ministry of Natural Resources and Environmental Conservation, hereby, issues this certificate to the person under Environmental Impact Assessment Procedure, Notification No. 616/2015.

(ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာလုပ်ငန်းစဉ်များအတွက် အဓိကကြပ်ငြာစာထုတ်ပေးရန် ၆၀၆/၂၀၁၅ သရုပ်ဖော်စာတမ်းနှင့် သဘာဝပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ကြည့်ရှုရမည့် ပြောင်းလဲရေးအခမဲ့ထောက်ခံထုတ်ပေးရန်အတွက်)

- | | |
|---|---|
| (a) Name of Consultant
(အကြံပေးကုမ္ပဏီအမည်) | U Phyo Maung Maung |
| (b) Citizenship
(နိုင်ငံသား) | Myanmar |
| (c) Identity Card / Passport Number
(မှတ်ပုံတင် / နိုင်ငံစားကတ်မှတ် အမှတ်) | 12/MaGaDa (M) 345829 |
| (d) Address
(ဆက်သွယ်ရန်လိပ်စာ) | No.36, Room 12, Baho Road, Aung Chan Thar Ward,
Sanchaung Tsp, Yangon.
Mobile phone: +95 9420069013
E mail: phyomg.ushed@gmail.com |
| (e) Organization
(အဖွဲ့အစည်း) | OSHE Services Company Limited |
| (f) Type of Consultancy
(အကြံပေးကုမ္ပဏီတိုက်ရိုက်ပူးပေါင်းဆောင်ရွက်ခြင်း) | Person |
| (g) Duration of validity
(ထုတ်ပေးရန်အတွက်သက်တမ်း) | 31 December 2019 |



Director General
Environmental Conservation Department
Ministry of Natural Resources and Environmental Conservation