The King's Court Hotel

Environmental Baseline Assessment and Management Plan

Prepared for: Gibson Development Company Ltd.

Prepared by: JSS Consulting

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EXECUTIVE SUMMARY

The Project is located in the western district of New Providence, Bahamas. New Providence is seven (7) miles long and twenty-one (21) miles wide; and approximately three hundred and fifteen (315) miles from Florida, USA. The proposed site is located on West Bay Street where the current Bahama Grill and New Duff restaurants exist. The site is approximately one point five (1.5) acres in size and the two (2) existing commercial buildings currently occupy the site.

The Owner proposes to undertake the construction of a one hundred and twenty-six (126) room hotel facility with a carrying capacity of two hundred and seventy-five (275) persons and a multi-level above ground parking facility. In addition to this, the Owner proposes to demolish two (2) pre-existing commercial buildings within the proposed project area prior to any construction activities. Site works will also include sorting of debris and the removal of all construction and demolition waste.

This Environmental Management Plan (EMP) has been designed to assist with achieving the Health, Safety, Social and Environmental (HSSE) Policy for The Project and to ensure that all its activities during the construction phase are conducted in a manner that results in minimal adverse impacts to the environment. The EMP outlines the impacts expected to occur during construction and details the mitigation measures that will be developed and implemented by the contractor, management, staff and subcontractors during construction, with the specific objective of eliminating or reducing any adverse environmental impacts.

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1.0 INTRODUCTION

1.1 Purpose & Objectives of Document

The Project Environmental Management Plan (EMP) defines the environmental management system measures, work practices and procedures that will be developed and implemented during the demolition and construction with the specific objective of eliminating or ensuring the minimization of environmental impacts during the contractor's works.

The following document was prepared at the request of Gibson Development Company Ltd., hereafter referred to as The Owner, for assistance in fulfilling the requirements of an application for a Certificate of Environmental Compliance approval. This EMP is a project specific document developed to ensure that appropriate environmental management measures are followed during the demolition and construction phase; hereafter referred to as The Project. Furthermore, this EMP outlines the specific mitigation measures that will be implemented in order to eliminate or reduce any adverse environmental impacts associated with the Contractor´s and Sub-contractor's activities.

The overall purpose of the EMP is to:

- Ensure Contractor and Sub-contractor(s) commitment to minimize environmental and social effects.
- Document environmental and social concerns and implement appropriate protection measures.
- Provide guidance to the Project Management Team regarding procedures for protecting the natural and social environment and minimizing social and environmental impacts.
- Provide relevant information and training regarding environmental and social issues, as and when required.
- Provide a reference to applicable legislative requirements.

Specific objectives include:

- To demolish the existing buildings while considering health and safety to ensure the protection of the workers, the public, and adjacent properties.
- To demolish the existing buildings, segregating the debris into recyclable and non-recyclable piles for proper disposal and management of wastes.
- To separate out the potential hazardous materials and dispose of the material with proper environmental management and safety.
- Maintain public communication and relationships with the surrounding community and businesses by informing the general public of the works program and schedule, employing residents as well as handling all complaints in a timely manner.
- Prevent harm, damage and loss to personnel, the environment and community assets including:
    - Reduce to impact to surrounding marine environments, other vegetation types and wildlife,
    - Prevention and mitigation of noise, dust and vibration impacts,
    - Protection of water resources, and
    - Minimize waste production and ensure correct waste management on site.

- Adhering to all environmental laws and regulations.
- Actively promote an environmentally responsible approach to The Project activities amongst the entire workforce.
- Maintain health and safety standards on site.
- Ensure Sub-contractors/Suppliers/Visitors apply the same or equivalent environmental practices as those defined by Owner and Contractor.
- Ensure all workers use personal protective equipment to prevent on-the-job injuries.

Throughout the performance of the activities, the Contractor will comply and ensure compliance of its Sub-contractors to these requirements as indicated in the following:

- Environmental Codes and regulations applicable to The Bahamas.
- Contract environmental requirements.
- Contractor internal environmental requirements.
- Other industry standards such ISO, OSHA and good practices where appropriate.

1.2 Scope of Works

The Project is located in the western district New Providence, Bahamas (See Figure 1). The site is located on West Bay Street and it is approximately one point five (1.5) acres in size. The site is currently occupied by two (2) pre-existing commercial buildings.

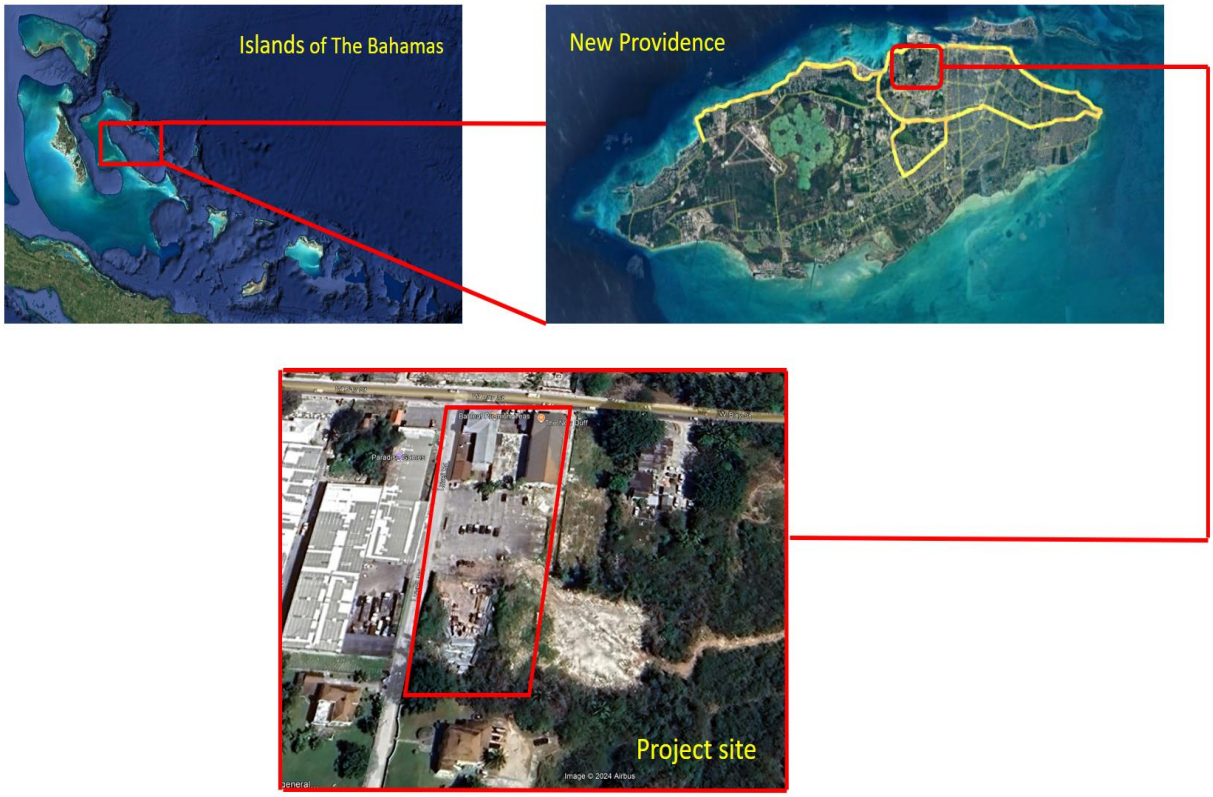

Figure 1: Project Location Map

The proposed works include the demolition of two (2) commercial buildings within the proposed project area and the construction of a one hundred and twenty-six (126) room

hotel facility with a carrying capacity of two hundred and seventy-five (275) persons and parking facility (see Figure 2). Works are scheduled to begin upon approval and are estimated to take approximately two (2) years to complete. The demolition phase is estimated to take approximately two to four (2-4) weeks and the construction phase eighteen to twenty-two (18-22) months.

Figure 2: The Project Conceptual Plan

2.0 LAWS, REGULATIONS AND REQUIREMENTS

The Contractor will be required to utilize accepted regulatory standards as a minimum to the protect the environment, the health and safety of all personnel (Contractor, Sub-contractors and third parties) working on The Project, and any others who may be affected by The Project activities.

2.1 National Environmental Codes and Regulations applicable to The Bahamas

Construction of The Project must comply with a range of national legislation, regulations, strategies and policies in order to provide for the management of environmental effects. There are fifteen (15) legislations that are relevant and applicable to the management of the physical and natural environment of the proposed Project as outlined in Table 1.

Table 1: National Laws and Regulations of The Bahamas

Act Title	Year Enacted	Comments
Water & Sewerage Corporation Act	1976	Provides regulatory framework for the management of water resources in The Bahamas.
Environmental Health Services Act	1987	Provides the framework for environmental regulations that will ensure compliance for The Project. The Act authorized the Department of Environmental and Health Services (DEHS) to develop regulations that prevent and control air pollution, soil
Wild Animals Protection Act	1968	Prohibits the taking, capturing or hunting of any animal without a permit.
Wild Birds Protection Act	1952	Prohibits the taking, capturing or hunting of any animal without a permit. Protects birds and eggs during closed season.
Plants Protection Act	1916	Relates to plant disease and controls importation of plants to prevent outbreaks of exotic disease and establishment of unwanted species.
Conservation and Protection of the Physical Landscape of The Bahamas Act	1997	Protects physical landscape from environmental degradation, flooding and removal of hills; regulates filling of wetlands, drainage basins or ponds; prohibits digging or removing sand from beaches and sand dunes; and prevents harvesting or removing protected trees. In order to perform activities that may affect the physical landscape of The Bahamas, permits must be obtained for these activities. The Department of Physical Planning issues the permits and enforces the regulations.
Planning and Subdivision Act	2010	This Act provides for: A land use planning-based development control system led by policy, land use designations and zoning. Prevention of indiscriminate division and development of land. Promotion of sustainable development in a healthy natural environment. Maintenance and improvement of the quality of the physical and natural environment. Protection and conservation of the natural and cultural heritage of The Bahamas. Planning for the development and maintenance of safe and viable communities.

The Forestry Act	2010	Protects wetlands, water reserves, endemic flora and fauna and protected trees. It establishes a legal framework for the long-term sustainable management of forests, a governmental forestry agency and a permanent forest estate. It requires a license for timber cutting and other activities in the Forest Reserves. The Act mandates that a National Forest Plan be developed every five years to govern management activities, such as harvesting and reforestation measures, prescriptions for fire prevention, wildfire suppression and prescribed burning and soil and water conservation.
The Private Roads and Subdivision Act	1961	This Act enables the Department of Physical Planning to regulate road construction and subdivision development.
Disaster Preparedness Response Act	2006	This Act provides for a more effective organization of the mitigation of, preparedness for, response to and recovery from emergencies and disasters.
Ministry of the Environment Act	2019	This Act establishes the Ministry of the Environment to oversee the integrity of the environment of The Bahamas, to make the minister responsible therefore a corporation sole, to establish the environmental administration fund and the environmental trust fund and for matters connected thereto.
The Environmental Planning and Protection Bill	2019	The Act provides for the prevention or control of pollution, the regulation of activities and the administration, conservation and sustainable use of the environment and for connected purposes. The Bill has been enacted by the Parliament of The Bahamas and if sent to the Gazette during the time of this project the legislation will be enforced.
Environmental Impact Assessment Regulations	2020	To provide procedures for a Certificate of Environmental Clearance (CEC). The Regulations provide procedures for the review proposed projects inclusive of monitoring and compliance requirements. The Regulations dictate the requirements for a Certificate of Environmental Compliance (CEC).
The Environmental Protection (control of plastic pollution) Act	2019	This Act prohibits single use plastic food ware and non-biodegradable and biodegradable single use plastic bags. Prohibit the release of balloons; regulate the use of compostable single use plastic bags and for connected matters.

Health and Safety at Work Act	2002	This Act makes provisions relating to health and safety at work and for connected purposes. It details the general duties of employers and employees at work.

2.2 National Environmental Policies of The Bahamas

Table 2: National Policies of The Bahamas.

Relevant National	Subject	Summary
National Policy for the Adaptation to Climate Change 2005	Climate change assessment for the immediate and project adaptation techniques for The Bahamas	The National Policy for the Adaptation to Climate Change outlines a national framework to meet the goals and objectives of the United Nations Framework Convention on Climate Change (UNFCC). The Bahamas is committed to reduce greenhouse gases and address climate change impacts.
National Invasive Species Strategy for The Bahamas, 2013	Identifies and recommends a management framework for the control and eradication of invasive species.	The National Invasive Species Strategy for The Bahamas originally published in 2003, was updated in 2013 as part of the Global Environment Facility funded project, Mitigating the Threats of Invasive Alien Species in the Insular Caribbean (MITIASIC). It sets forth a management framework for the control and eradication of invasive species.
National Biodiversity Strategy and Action Plan, 1999	A plan to maintain biodiversity through sustainable development for a small island developing nation.	The Bahamas Government is committed to conserve biodiversity and to pursue sustainable development. This document highlights the role of biodiversity in the Bahamian social and environmental context and recommends measures to

		ensure its compatibility with future development.

2.3 ISO 1400

The ISO 14000 is a set of industry standards that provide practical tools for companies and organizations of all kinds looking to manage their environmental responsibilities.

ISO 14001:2015 and its supporting standards such as ISO 14006:2011 focus on environmental systems to achieve this. The other standards in the family focus on specific approaches such as audits, communications, labeling and life cycle analysis, as well as environmental challenges such as climate change.

2.4 Occupational Safety and Health Administration (OSHA)

In the absence of specific health and safety construction regulations, Contractors should adhere to the Occupational Safety and Health Administration (OSHA) regulations. OSHA is an agency of the United States Department of Labor. OSHA's mission is to "assure safe and healthy working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education and assistance". The agency is also charged with enforcing a variety of whistleblower statutes and regulations. OSHA's workplace safety inspections have been shown to reduce injury rates and injury costs without adverse effects to employment, sales, credit ratings, or firm survival. Regulations such as the use of Personal Protective Equipment (PPE), housekeeping, safety training and education, fall protection and working in confined space etc.

2.5 Government Departments

Government departments that will be involved with aspects of approval and permitting of this project include:

Department of Environmental Planning and Protection (DEPP)

The Department of Environmental Planning and Protection will review and approve the EMP for The Project. Monthly environmental reports will be submitted to DEPP.

Forestry Unit

The Forestry Unit will authorize and provide permits for harvesting and removal of protected trees.

Ministry of Public Works

The Ministry of Public Works will authorize and provide permits for activities and maintain physical infrastructure in the country.

Department of Physical Planning

The Department of Physical Planning will authorize and provide permits for activities such as excavation, filling, roadworks, and all construction activities.

3.0 ENVIRONMENTAL BASELINE ASSESSMENT

3.1 Botanical Assessment

Field studies for The Project were conducted on the 24th of September and the 1st of October 2024. The purpose of the field study was to map vegetation types, ascertain floristic diversity, locate and quantify invasive species, and conduct a protected species assessment.

3.1.1 Methodology

Vegetation types were mapped and verified by walking along the interior and the perimeter of the site using existing footpaths, and surveyor transects. Vegetation Type taxonomy was based on Areces et al. (1999). Vascular plant species occurring in each vegetation type were recorded and used to compile a floral list (See Table 3). Plant taxonomy was based on Correll and Correll (1982). The presence, location, and abundance of vascular species listed under the National Invasive Species Strategy for The Bahamas (2013), and the Protected Trees Order (2021) were noted when encountered.

3.1.2 Habitat Description

The one point five (1.5) acre terrestrial site contains one (1) terrestrial ecosystem, an Interior Upland with one (1) vegetation class. The one (1) vegetation class observed on site was a human-altered environment. The site has an even topography that extends to a man-made wall in the back of The Project site that divides The Project site from the neighboring property. The soil type can be described as a limestone substrate throughout The Project site. Given that human activity has affected the entire site in the past, vegetation growth can be characterized as secondary growth.

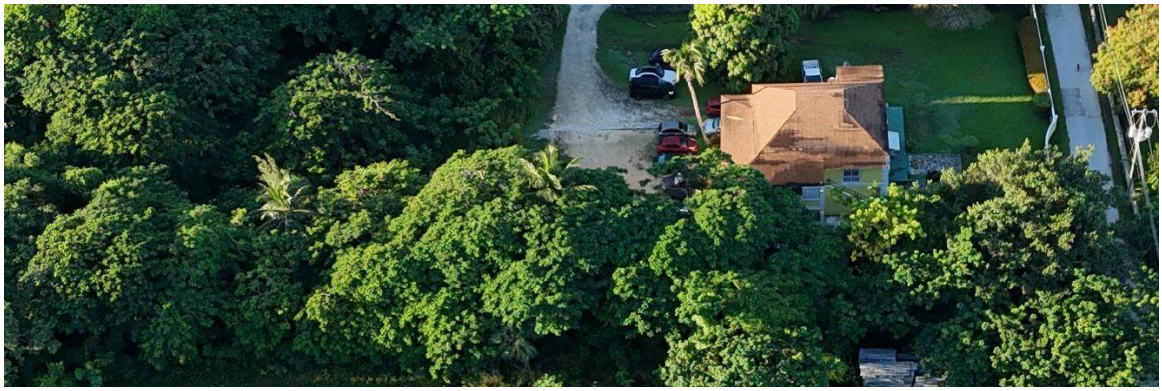

Photo 1: Wall overgrown with vegetation that separates the project site and neighboring property.

3.1.2.1 Interior Upland

One (1) interior upland vegetation type was observed on the proposed project site: a human-altered environment.

3.1.2.1.1 Human Altered Environment

Human-altered environments are defined as areas that have changed or deteriorated due to human activity. These areas consist primarily of species that are considered to be regenerating, introduced, and invasive. *Megathyrsus maximus, Dactyloctenium aegyptium,* and *Capraria biflora* scrubland alliance vegetation class were observed on the southern perimeter of the site. This perimeter of the site contains invasive species such as *Leucaena leucocephala* (Jumbay) and *Megathyrsus maximus* (Guinea grass).

Photo 2: *Megathyrsus maximus - Dactyloctenium aegyptium - Capraria biflora* scrubland Alliance

3.1.3 Vegetation Map

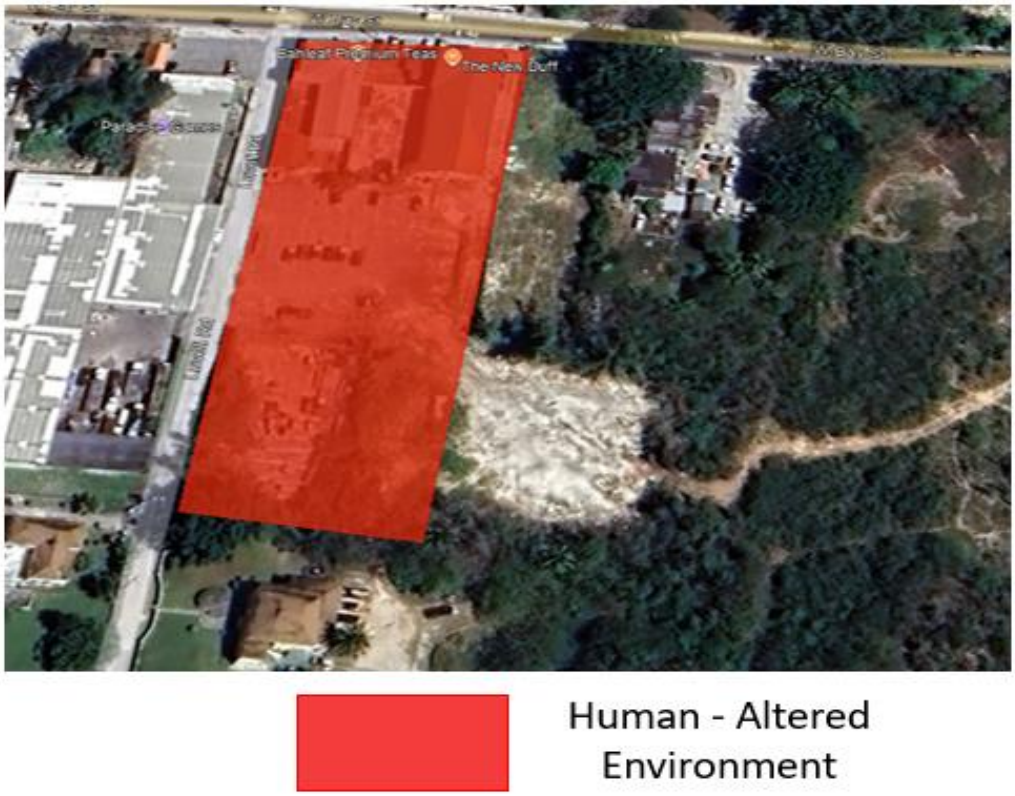

Figure 3: Vegetation type distribution on the proposed King's Court Hotel Project Site, Nassau, New Providence, The Bahamas.

3.1.4 Vascular Plant Diversity

The site's species richness and diversity are consistent with what is predicted for a site with one (1) terrestrial ecosystem and one (1) vegetation class which was the human-altered environment. A total of twenty-eight (28) species were recorded on the site, including six (6) invasive species and two (2) protected species (See Table 3). * Denotes protected species observed on the site.

Table 3: Vascular plant species observed and recorded on the proposed King's Court Hotel Site, New Providence, The Bahamas.

Table 3 Key: **HAE =** Human-Altered Environment

Family	**Botanical Name**	**Common Name**	**Location (HAE)**
Arecaceae	*Adonidia merrillii*	Christmas Palm	✓
Fabaceae	*Albizia lebbeck*	Woman's Tongue	✓

Poaceae	*Andropogon virginicus*	Beard Grass	✓
Asparagaceae	*Aspidistra elatior*	Cast Iron Plant	✓
Asteraceae	*Bidens alba*	Shepherd's Needle	✓
Burseraceae	*Bursera simarouba**	Gum Elemi	✓
Scrophulariaceae	*Capraria biflora*	Goat Weed	✓
Poaceae	*Cenchrus echinatus*	Southern Sand Burr	✓
Lamiaceae	*Clerodendrum trichotomum*	Clerodendrum	✓
Arecaceae	*Cocos nucifera*	Coconut Palm	✓
Poaceae	*Dactyloctenium aegyptium*	Crow Foot Grass	✓
Fabaceae	*Delonix regia*	Poinciana	✓
Moraceae	*Ficus aurea*	Golden Fig	✓
Boraginaceae	*Heliotropium curassavicum*	Rooster Comb	✓
Oleaceae	*Jasminum fluminense*	Jasmine Vine	✓
Verbenaceae	*Lantana camara*	Red Sage Brush	✓
Fabaceae	*Leucaena leucocephala*	Jumbey	✓
Euphorbiaceae	*Manihot esculenta*	Cassava	✓
Poaceae	*Megathyrsus maximus*	Guinea Grass	✓
Sapindaceae	*Melicoccus bijugatus*	Guinep	✓
Nyctaginaceae	*Pisonia acuelata*	Haulback	✓
Euphorbiaceae	*Ricinus communis*	Castor Bean Plant	✓
Arecaceae	*Sabal palmetto**	Sabal Palm	✓
Solanaceae	*Solanum erianthum*	Salve Bush	✓
Verbenaceae	*Starchytarpheta jamaicensis*	Blue Potterweed	✓

Bignoniaceae	*Tecoma stans*	Yellow Elder	✓
Commelinaceae	*Tradescantia spathacea*	Oyster Plant	✓
Arecaceae	*Washingtonia sp.*	Washingtonia Palm	✓

3.1.5 Invasive Species Survey

Six (6) invasive species were observed on the site. The species are outlined with their abundance on site, occurrence, and recommendation for control (See Table 4). Methods of control depend on the richness and distribution of the invasive species present on site. Invasive species whose richness and distribution are too enormous to completely eradicate are recommended for control, which means their spread can be stifled through mitigative measures. While species whose richness and distribution are relatively small are recommended for eradication.

Table 4: Invasive species recorded on the proposed King's Court Hotel Project Site, New Providence, The Bahamas.

Species	**Occurrence & Abundance**	***Recommendations**
Jasminum fluminense (**Jasmine vine**)	Multiple mature vines within the project site.	Not Listed
Megathyrsus maximus (**Guinea Grass**)	Multiple 3ft mature bustles of grass within the perimeter of the site	Not Listed
Lantana camara (**Red Sage Brush**)	Multiple 2 to 4 ft mature plants within the southern perimeter of the site	Eradicate
Ricinus communis (**Castor Bean Plant**)	Multiple 5 ft tall plants within the southern perimeter of the site	Eradicate
Albizia lebbeck (**Woman's tongue**)	20 ft mature tree within the southern perimeter of the site	Eradicate
Leucaena leucocephala (**Jumbay**)	Multiple 2-3ft seedlings within the southern perimeter of the site.	Eradicate

Photo 4: Invasive species observed on site- Top left: *Albizia lebbeck* (**Woman's tongue**), Top right: *Leucaena leucocephala* (**Jumbey**), Bottom centered: *Jasminum fluminense* (**Jasmine vine**).

3.1.6 Protected Species Survey

A protected species plot was not established on site however two (2) protected species were observed. The two (2) protected species observed on the proposed project site were one (1) *Bursera simarouba* (Gum Elemi) and one (1) Sabal *palmetto* (Sabal Palm) all of which are listed in the Forestry Act Declaration of Protected Trees Order 2021.

3.1.6.1 Local/National Legislation & Policy

The Forestry Act Declaration of Protected Trees Order 2021 lists one hundred and twenty-seven (127) vascular plant species as protected. Eighty-six (86) species are listed as Endemic or Endangered or Threatened and forty-one (41) are listed as Cultural or Historical and Economic. Endemic species are native and restricted to the archipelago, island groupings, or specific islands. Cultural or historical species are species of historical or cultural importance, such as those utilized for boat building and straw work.

Cultural, Historical, or Economic Protected Trees

Both *Bursera simarouba* (Gum Elemi) and *Sabal palmetto* (Sabal Palm) are listed under the subsection Cultural, Historical, or Economic (Schedule 2) in the Act.

Table 5: Protected species recorded on the King's Court Hotel Project site, New Providence, The Bahamas

#	Species Recorded		Location
	Botanical Name	**Common Name**	
1	*Bursera simarouba*	Gum Elemi	1-15ft tall mature tree within the western perimeter of the site.
2	*Sabal palmetto*	Sabal Palm	1-12ft mature palm within the western perimeter of the site

4.0 AVIAN SURVEY

An avian survey was conducted to identify the presence, abundance, and habitat utilization of avian species within the site's boundaries.

4.1 Methodology

The assessment comprised four (4) hours of active avian and ecological observations. Field studies consist of a winter avian survey (September-March), conducted on the 24th of September and the 2nd of October 2024 between 10:00 am to 11:30 pm and 9:00 am to 11:00 am, respectively. The avifauna of the area was assessed and recorded by walking along the perimeter of the site and within the interior of the site by utilizing established footpaths, roadways, and cleared pathways. Avifauna and fauna taxonomy is based on Currie et al. (2019). Species numbers were recorded in the abundance categories, Single (1), Few (2-10), and Many (11-100). Species recorded were compiled for final abundance estimates. Status is based on the International Union for Conservation of Nature (IUCN).

4.2 Findings

4.2.1 Species Diversity

Thirteen (13) species were recorded during the winter avian survey (see Table 6)

Table 6: Avifauna observed during the winter avian survey on the proposed King's Court Hotel Project Site, Nassau, New Providence, The Bahamas.

Table 6 Key

Range	**Status**
PRB = Permanent Resident Breeding	**LC = Least Concern (Conservation-IUCN)**
WRN = Winter Resident Non-Breeding	**NT = Near Threatened (Conservation-IUCN)**
	T = Threatened (Conservation-IUCN)

SRB = Summer Resident Breeding	**IUCN = International Union of Conservation of Nature**
E = Endemic Species	
e = Endemic Subspecies	
I = Introduced species	

Family	**Scientific Name**	**Common Name**	**Master Observation**	**Range/ Conservation Status**
Charadriidae	*Charadrius vociferus*	Kill Deer	Single	PRB/LC
Thraupidae	*Coereba flaveola bahamensis*	Bananaquit	Few	PRB/e/LC
Columbidae	*Columbina passerina bahamensis*	Common Ground-Dove	Few	PRB/e/LC
Cuculidae	*Crotophaga ani*	Smooth-billed Ani	Few	PRB/LC
Mimidae	*Dumetella carolinensis*	Gray Catbird	Single	WRN/LC
Mimidae	*Mimus polyglottos polyglottos*	Northern Mockingbird	Few	PRB/LC
Columbidae	*Patagioenas leucocephala*	White-crowned pigeon	Many	PRB/NT
Parulidae	*Setophaga dominica*	Yellow-throated warbler	Few	WRN/LC
Parulidae	*Setophaga tigrina*	Cape May Warbler	Few	WRN/LC

Columbidae	*Streptopelia decaocto*	Ring-necked Dove	Few	PRB/I/LC
Turdidae	*Turdus plumbeus*	Red-Legged Thrust	Single	PRB/e/LC
Tyrannidae	*Tyrannus dominicensis*	Gray Kingbird	Few	SRB/LC
Columbidae	*Zenaida macroura*	Mourning Dove	Single	PRB/LC

4.2.2 Range

A species' range can be defined as an area where a particular species can be found. Migratory birds tend to have seasonal ranges while species with restricted ranges spend their entire life on the same island or in the same geographical region

4.2.2.1 Permanent Resident Breeding

Permanent Resident Breeding (PRB) species is the resident species that live and breed year-round throughout the Bahama Islands. Nine (9) PRB species were observed on site. Approximately sixty-nine percent (69%) of the species recorded during the survey were PBR species.

Photo 5: Permanent Resident Breeding species- Left to right: *Mimus polyglottos polyglottos* (Northern mockingbird), *Patagioenas leucocephala* (White Crown Pigeon) and *Turdus plumbeus* (Red-Legged Thrust).

4.2.2.2 3.2.2.2 Winter Resident Non-Breeding

Winter Resident Non-breeding (WRN) refers to species that migrate to The Bahamas from North America from September to March. Three (3) WRN species was observed on site. Approximately twenty-three percent (23%) of species observed during the bird survey were winter residents non-breeding.

Photo 6: Winter Resident Non-Breeding - Left to Right: *Setophaga tigrina* (Cape May Warbler) and *Setophaga dominica* (Yellow- Throated warbler)

4.2.2.3 Summer Resident Breeding

Summer Resident Breeding (SRB) species refers to summer migrants from North & South America that utilize the Bahama Islands as their breeding/nesting grounds during the months of April- August. One (1) species observed on site was a SRB species. Approximately eight percent (8%) of the species recorded on the site were SBR.

Photo 7: *Tyrannus dominicensis* (Gray Kingbird)

4.2.2.4 Endemic Species and Subspecies

Endemic species and subspecies refer to birds that are found only in The Bahamas. There were no endemic species observed on the site however, there were three (3) endemic subspecies observed. The species observed were *Coereba flaveola bahamensis* (Bananaquit), *Columbina passerina bahamensis* (Common Ground Dove), and *Turdus plumbeus* (Red - Legged Thrust). Approximately twenty-three percent (23%) of the birds observed were endemic subspecies.

4.2.2.5 Introduced species

Introduced species are birds that were introduced to The Bahamas due to various reasons such as human error or illegal bird trade. There was one (1) introduced species observed on site the *Streptopelia decaocto* (Ring necked dove) which accounts for 8% of birds observed.

Photo 8: *Streptopelia decaocto* (Ring necked dove)

4.2.3 Conservation Status

4.2.3.1 Protected species

All species observed during the site assessment are protected under the Wild Birds Protection Act Chapter 249 (Statute Law of The Bahamas).

4.2.3.2 Endangered species

None of the species recorded are classified as endangered however, *Patagioenas leucocephala* (White crown pigeon) is classified as near threatened.

4.2.4 Additional Observations

Terrestrial ecosystems support a variety of other fauna besides avifauna. These species depend on and aid in the overall health of the ecosystem. The proposed project site contains reptiles, amphibians, mollusks (gastropoda), and a myriad of arthropods (arachnids, insects, and hymenopterans) (See Table 7).

Table 7: Additional terrestrial fauna observed on the proposed King's Court Hotel Project site New Providence, The Bahamas

Family	**Scientific Name**	**Common Name**
Nyphalidae	*Anartia jatrophae guantanamo*	White Peacock
Araneidae	*Cyrtophora citricola*	Tropical Tent-web Spider

Nyphalidae	*Danaus plexippus megalippe*	Monarch Butterfly
Cicadidea	*Diceroprocta bonhotei*	Bahamian Cicada
Nyphalidae	*Dryas iulia carteri*	Julia
Nyphalidae	*Euptoieta hegesia hegesia*	Mexican Fritillary (Butterfly)

4.2.5 Habitat Utilization

Observed on site were avifauna and other terrestrial fauna making use of a variety of habitats. There was extensive feeding observed on site, particularly in the *Ficus aurea* (Golden Fig), which contains flowers, fruits, and buds that attracted and provided food for all the avifauna observed on the site. There was no nesting observed on the proposed project site; however, a juvenile *Patagioenas leucocephala* (White Crown Pigeon) was observed, which could suggest that nesting occurred previously. The site does not provide seasonal habitats utilized by wading birds (Inland Freshwater Wetland/Pond & Seasonal Ponds) or habitats for sea birds (isolated rocks, intertidal zone). Additional avian field studies repeated over a period are likely to record other species on the site; these species would utilize the site for perching, nesting, and feeding.

5.0 ENVIRONMENTAL MANAGEMENT FRAMEWORK

This EMP and associated environmental documentation will be maintained and updated throughout the duration of The Project. The Project Environmental Manager is responsible for incorporating DEPP and the Owner's comments on this document as well as updating it to reflect new project information. Revisions to this document will be performed if:

- New project design parameters or construction methodologies are introduced that could change the environmental impact or mitigation measures.
- Changing environmental requirements, commitments, or conditions by Local Authorities as a result of incidents and deviations.

5.1 Construction Management

5.1.1 Roles and Responsibilities

The overall responsibility of environmental management implementation lies with the Contractor with the Environmental Manager (EM) ensuring compliance. The Contractor shall ensure that all environmental management requirements identified within the plan are brought to the attention of all personnel including Sub-contractors, as applicable to their work, and ensure that there is compliance with requirements.

Descriptions and titles may vary based on the Contractor's designations, but the overall role and responsibilities should be similar. The key individuals with environmental responsibilities are described in the following paragraphs:

The Owner:

The Owner has overall responsibility for environmental issues and ensuring all measures are implemented by the Contractor.

Project Manager - TBD (will be updated prior to commencement of works)

The Project Manager (PM) will ensure that all environmental management requirements are implemented and brought to the attention of all personnel including the Sub-contractors and ensure that the requirements are complied with.

The PM will be responsible for the following:

- The PM is the main point of contact for contract negotiations/ discussions.
- The PM manages the overall project.
- The PM ensures that The Project remains within budget and on schedule.
- The PM has prime responsibility for Quality on The Project.
- The PM will ensure that in cooperation with the Quality Manager (QM). Only materials compliant with the contract specifications and which have been approved by the owner will be used within the permanent works.
- The PM will ensure that the works are overseen by enough suitably experienced site supervisors, so that the works proceed at a satisfactory pace.
- The PM will nominate a member of his team who will attend the final inspection of the works as required.
- The PM – or his nominee – will submit copies of materials test reports to the Engineer.
- The PM will arrange for copies of all test reports and related documents to be kept at the site office and stored securely.
- The PM will ensure that materials are placed, compacted, and finished using equipment appropriate for the purpose, and that relevant methods are used in order to achieve the specified density, grade, fall and finish for each material type.
- The PM will nominate a responsible person who will notify the QM in a timely manner of the day-to-day testing requirement at site so that the necessary number of tests of each material type is carried out.

Environmental Manager - Janeen Bullard (357-9262)

The Environmental Manager (EM) has responsibility for all environmental issues and will track all environmental inspections and potential hazards. The EM will enforce all hold points and has the authority to stop works because of environmental issues. The EM will ensure that environmental measures are implemented prior to commencement of works. Monthly site visits will be conducted with special oversight of construction in sensitive areas.

The EM will be responsible for the following:

- The EM will report to and liaise with DEPP.
- The EM will liaise with all other managers on The Project for environmental compliance.
- The EM will identify environmental competence requirements for all staff working on The Project and ensure delivery of environmental training to personnel within The Project team provision.

- The EM will provide advice and liaise with the construction teams to ensure that environmental risks are identified, and appropriate controls are developed and included within method statements.
- The EM will monitor and provide reporting based on the EMP criteria and liaise with all parties on any matters arising from non-compliance.
- The EM will manage the environmental monitoring programme, including noise, vibration and dust, review of the routine reports etc.
- The EM will conduct site inspections.
- The EM will provide reports, updates, and any infractions to DEPP.
- The EM will include Health and Safety matters in monthly report.
- The EM will include the comment and relative responses associated with the public grievance mechanism in the monthly report.

6.0 ENVIRONMENTAL MANAGEMENT TOOLS

The following environmental management tools will be implemented to ensure environmental compliance on The Project:

6.1 Site Inspections

Site inspections are a review of crucial parts of the works, ensuring that the works progress as intended, both in terms of quality and compliance. The site inspections may include the following:

- Site Safety and Health Materials – checks of items such as PPE, toilets, security fencing etc.
- Solid Waste Management.
- Dust & Air Pollution.
- Noise Monitoring.

These are to be performed daily. DEPP is invited to attend inspections and inspections may be conducted upon their request. Records of inspections will be available to all parties. Additional inspections will also be done after intense or prolonged inclement weather.

6.2 Reports and Communications

The following reports should be submitted to the Owner for review:

- **Monthly Environmental Reports** – reports the environmental standards on site and addresses any environmental concerns.

6.3 Incident Reports

In the case of incidents, all aspects of the incident are to be addressed and entered to the relevant logs for appropriate review (See Appendix A-1 for template). The PM is to be notified of any incident with actual or potential site impacts on the community or the biophysical environment immediately. The PM will inform the EM and Owner who will make an assessment followed by a detailed report and measures to mitigate against any further occurrence.

6.4 Checklist of Environmental Stipulations

The Contractor, further to the above items will use the following as a guide for general execution of the works:

- There shall be clear demarcation of the extent of Contractor's work site(s) including the limit of works.
- Health and safety equipment (including protective clothing and boots) shall be available and in use. First aid kits and fire extinguishers will be mandatory.
- Refueling and mechanic sites are lined and bunded to confine and mitigate the effects of spillage and will be protected from rainwater.
- Discharge of dust and fumes shall be minimized by constant wetting of loose material and maintenance of machinery on site.
- Noise abatement on construction sites shall minimize avoidable inconvenience to local populations.
- Dump trucks shall be equipped with tarpaulins or similar devices to prevent material spillage and roads will be kept clean of mud and construction debris.
- There will be no disposal of non-biodegradable materials on site and all spoils will be removed to the landfill.
- Used oils shall be containerized and transported with other scrap equipment to an approved facility.
- There shall be NO burning of waste on site.
- The Contractor shall remove all construction equipment and scrap waste from the site on completion.

6.5 Meetings

Periodic meetings should be held, that includes necessary parties, to discuss ongoing, upcoming works, or any issues incurred during works to ensure proper communication.

6.6 Environmental Health and Safety Training

Training of site workers will be conducted by the Contractor and the Owner to include Site Induction and Toolbox Talks. All workers are to undergo the Site Induction and Toolbox Talks should be conducted on at least a weekly basis. The training should ensure that all employees understand their obligation to exercise due diligence for environmental matters including:

- Familiarization with the requirements of the EMP (summary of the EMP and all associated management plans).
- Environmental/accident emergency response training (outlining potential environmental emergencies and relevant contacts and response procedures), including spill management/response procedures.
- Familiarization with site environmental controls (bunded areas, spill kit locations etc.).
- Monitoring programs.
- Site signage will be erected as needed to display messages on site to alert personnel of surrounding works and/or hazards.

6.7 Grievance Mechanism

Grievances can be emailed to the PM. The PM will forward grievances as needed. Grievances will be addressed within a two-week period. Both grievances expressed by stakeholders and the response plan will be shared with DEPP. Signage will be posted with the Grievance Mechanism. The comments and relative responses associated with the public Grievance Mechanism will be included in the environmental monthly reports.

6.8 Monitoring

The implementation of this EMP will be done by the Contractor and supported by the PM, through the performance of periodic inspections and health safety and environmental meetings. Inspections will also be done after intense or prolonged inclement weather. The Contractor will be provided with the outcomes and action items arising from environmental inspections. The Contractor will then update The Project team of any specific issues and monitor the implementation of action items.

7.0 DEMOLITION METHODOLOGY

The scope of proposed works will include:

- Fence and screen installation around the site, where necessary.
- Installation of relevant Safety Signage.
- Inspection of building prior to commencement of works and removal of any deleterious materials.
- Demolish building.
- Demolition waste disposal.

Method Statement

1. Pre-commencement

- Submit required documents to The Ministry of Public Works for demolition permit approval.
- Inspect the building to assess the structural integrity, and review the works to be performed.
- Arrange with BPL/ BTC/ Cable Bahamas/ WSC to disconnect services to the building.
- Secure the site to be demolished.

2. Demolition

The building being demolished consists of a concrete structure, and timber roof. Prior to any structural demolitions taking place, the site supervisor and plant operatives will walk the building to confirm whether or not there are any voids, or cavities. If so, they will be backfilled levelled with the existing ground level.

Prior to commencement, the disposal site for all waste materials arising from the demolitions will be determined. The disposal site for demolition debris generated at The Project site is the New Providence Ecological Park (NPEP).

The building will be soft stripped prior to demolition to remove as much of the waste materials from the building ahead of the demolition works. Works will be carried out internally to avoid dust exposure outside of the building. Materials that are to be removed by the internal soft strip can include doors, door frames, fixed and non-fixed furniture, floor coverings, windows, timber of any description, (not pertaining to roof or main structure), toilets, pipe work, ducting (if installed), electrical items and any other non-structural materials. Material will be segregated then loaded onto skips/ dump trucks by use of excavator or by hand method and transport to NPEP for disposal.

After the soft strip is completed, concrete walls/ columns will be knocked inwardly to contain the debris within the building footprint as best as possible. There will be no stockpiling of material on site; as the building is stripped and demolished, materials will be sorted, placed in skip/ dump trucks and transported to NPEP.

Once demolition of the building is completed and debris is removed from site, the foundation of the building will be demolished. Prior to removing any ground slabs or foundations the entire area will be checked in conjunction with site services plans for 'live' services (such as BPL wires). Once completed and the area is deemed safe, the concrete foundation or floor slabs will be broken up using heavy duty hydraulic breakers and excavators. Materials will be sorted, placed in skip/ dump trucks and transported to NPEP.

Personal Protective Equipment

All personnel shall be provided with appropriate P.P.E., particularly hi-vis clothing, hard hats, safety footwear, safety glasses and gloves; and will be expected to wear them at all times.

Equipment

The following equipment will be used during demolition activities.

- 340 - 500 Excavator
- Trucks
- Hand tools
- Heavy duty hydraulic breaker

8.0 REGISTER OF SIGNIFICANT ASPECTS AND IMPACTS

Environmental impacts of The Project are impacts to the natural communities and wildlife in the area that can be reasonably inferred, considering the footprint of impacts, and known habitats on-site. Other expected impacts are those related to normal construction and operation such as waste generation and disposal, fueling, use of potentially hazardous materials as well as other accidents or malfunctions, which may entail an environmental component. The Register of Significant Aspects and Impacts considers potential impacts that may be due to construction activities. The Register will be used in the development of method statements to proactively manage and mitigate potential impacts pertaining to The Project. The Register of Significant Aspects and Impacts evaluates the potential impacts identified in the Environmental Impact Assessment and assigns risk and magnitude scores. Risk Scores are measuring the likelihood of the impact occurring and is measured on a scale of 1-10 with 1 being unlikely to occur and 10 being highly likely to occur. Magnitude scores measures the scale of the impact if it occurs. Magnitude ranges are parameters are Low, Medium, and High. Low Impact refers to short-term localized impact reversible in 1 year. Medium Impact refers to moderate term implications reversible in a 5-year period. High Impact refers to long term impacts that are not reversible within 5 to 10 years or are irreversible.

Table 8: Register of Significant Aspects and Impacts.

Significant Aspect and Impact	Activity	Potential Impact	Environmental and Social Management Strategy	Risk Score	Magnitude Score
CONSTRUCTION PHASE					
Air Pollution	Dismantling of buildings.	Dust Pollution. Disturbance to the local population and pedestrians	*Prior information will be given to the adjacent offices regarding the demolishing process, scheduling of the activities etc. *Water spraying at the demolition site.	8	Low

Significant Aspect and Impact	Activity	Potential Impact	Environmental and Social Management Strategy	Risk Score	Magnitude Score
			*Fencing/Install barriers to shield from dust and aggregates. *Do not accumulate and burn waste at the site.		
Noise and Light Pollution	Demolition	Sound intensity	*Avoid usage of machines/ equipment with extra noise. *Carry out demolition activities in stages, give adequate notice and information of activities to the adjoining stakeholders. *Install corresponding signs, and security on site *Provide adequate lighting at demolition site for the night to prevent accident	6	Low
Solid Waste	Demolition	Increase of solid and hazardous waste. Disturbance to the local population	*The debris will be disposed of at the New Providence Ecology Park (NPEP). *The waste management area is designated by NPEP before the demolition.	5	Medium

Significant Aspect and Impact	Activity	Potential Impact	Environmental and Social Management Strategy	Risk Score	Magnitude Score
		and pedestrians.	*In case of hazardous waste store in safe place and make the provision for management. *Demolition waste will be disposed of at the New Providence Ecology Park (NPEP).		
Ground Water Quality	Utility Installation	Groundwater contamination	*Limit trench depth and ensure it is above the existing groundwater table. *NO dewatering directly into exposed groundwater or native vegetation.	1	Medium
Ground Water Quality	Flooding	Increase in standing water	*Installation of a drainage system. *Construction of drainage retention ponds or swales designed to collect and drain water at a fast rate. *Buildings should also be elevated to reduce the risk of flooding in the event of extreme weather and flooding conditions.	2	Low

Significant Aspect and Impact	Activity	Potential Impact	Environmental and Social Management Strategy	Risk Score	Magnitude Score
			*Establishment of flood control ditches to allow to reduce the risk of rain-induced flooding. *Regular cleaning and maintenance of the drains. *Revegetation of areas to reduce erosion and slow the rate of storm water runoff *Constructing sedimentation basins to temporarily store storm water, *Permeable areas in the parking lot to reduce standing water and runoff.		
Ground Water Quality	Heavy Equipment and Hazardous Waste	Oil spills. Introduction of hazardous substances into groundwater. Hazardous substances may include sediment,	*See Fuel Spill Prevention Plan (Appendix D). *Wash water from the concrete trucks will be contained to a designated wash station. *Sediment and erosion control methods will be in place prior to and during construction.	8	Medium

Significant Aspect and Impact	Activity	Potential Impact	Environmental and Social Management Strategy	Risk Score	Magnitude Score
		wastewater, concrete wash waters, lubricants, fuels, and hydraulic fluids.	*No hazardous substances will be permitted to escape into the open water at the work site.		
Air Quality	Construction Activities	Dust Pollution	*Water spraying the site *Fencing/Install barriers (to shield from dust and aggregates. *Avoid usage of machines/equipment with extra noise. *Do not accumulate and burn waste at the site. *Contractor grievance mechanism.	10	Low
Solid Waste	Landscaping	Vegetative Waste	*Recycling by creation of mulch or bio char.	10	Low
Solid Waste	Construction Activities	Construction Waste	* Materials to be disposed of at NPEP.	10	Low

Significant Aspect and Impact	Activity	Potential Impact	Environmental and Social Management Strategy	Risk Score	Magnitude Score
			*Refuse and wastes should be removed from the site regularly and disposed of at NPEP. *In case of hazardous waste, store in safe place until it can be transported to the Harts NPEP for management. *Excavated material will be reused in construction and made available for community projects. *All dump trucks will require tarpaulins when transporting material.		
Hazardous Waste	Heavy Equipment Operation	Equipment Fuel Spills	*Proper usage and disposal of oil spill material. *Pollution prevention practices.	5	Medium
Hazardous Waste	Construction Activities	Concrete Spills and Asphalt Spills	*Proper use of prepared concrete and asphalt. *Creation of a concrete washout station.	8	Medium

Significant Aspect and Impact	Activity	Potential Impact	Environmental and Social Management Strategy	Risk Score	Magnitude Score
Noise and Light Pollution	Construction Activities	Excessive Noise and Light Pollution	*Precaution will be taken while using the machines and equipment during construction. Avoid usage of machines/equipment with extra noise. *Work will be conducted during reasonable hours. *The contractor will inform the surrounding offices and community prior to operations that bear the risk of nuisance and accidents. *Light impacts will be managed by directing light away from residential and vegetative areas, tilting lights downwards, and using light shades where necessary.	5	Low
Sewage and Refuse Disposal	Installation of Portable Potties	Water Quality	*Portable toilets will be used during construction. Portable potties will be placed one hundred and fifty feet (150 ft.) away from any open water bodies and tied down to prevent tipping during weather events.	5	Medium

Significant Aspect and Impact	Activity	Potential Impact	Environmental and Social Management Strategy	Risk Score	Magnitude Score
Traffic and Transport	Utility Installation	Traffic Accident at Trenches	*Trenches are left open for no longer than 24 hours between trenching and pipe laying. Once pipe laying is completed, trenches are backfilled. During the exposure time the trenches are surrounded by reflective cones and caution tape in some areas. * The transportation of the waste and other materials should be in safe manner considering road traffic regulations. *Adequate signage will be placed throughout The Project area to help manage traffic. *Flag men should be assigned on site to help manage or redirect traffic as needed. *Communication with community regarding construction traffic. *Contractor Grievance Mechanism. *Project Grievance Mechanism.	6	Low

Significant Aspect and Impact	Activity	Potential Impact	Environmental and Social Management Strategy	Risk Score	Magnitude Score
Safety for Workers	Construction	Accidents and Injuries	*The mandatory use of PPE (helmets, safety belts, masks, gloves, and boots) by workers depending on the nature of work. *All workers familiar with site emergency response plans and safety procedures. *All workers familiar with material handling procedures. *Workers Code of Conduct *First responders and first aid kits identified and present on site. *Shaded areas will be provided for breaks. * Drinking water will be available at all times. *Contractor Grievance Mechanism. *Project Grievance Mechanism.	5	Medium
OPERATIONAL PHASE					

Significant Aspect and Impact	Activity	Potential Impact	Environmental and Social Management Strategy	Risk Score	Magnitude Score
Air and Noise Quality	Emissions from Heavy Equipment and Vehicles	Pollution	*Diesel and gasoline operating equipment must have preventive maintenance in compliance with applicable environmental regulations. *Gasoline operating equipment should have catalytic converters in good condition. Movement equipment (forklifts, cranes, etc.) will adjust their operation to the guidelines of these measures. Catalytic converters or filters for diesel equipment shall be incorporated, as required. *Perform material strength tests, galvanizing and other processes/tests will be done at the factory and not on site. *If back-up generators are maintained on site, any maintenance or testing programs will be done during daytime working hours in order to prevent any discomfort or	3	Low

Significant Aspect and Impact	Activity	Potential Impact	Environmental and Social Management Strategy	Risk Score	Magnitude Score
			nuisance to neighbouring communities.		
Hazardous Waste and Solid Waste	Operation Activities	Pollution	*Implement a Solid Waste Management Plan. *Implement a Hazardous Waste Management Plan.	8	Low
Terrestrial Ecosystem	Operation Activities	Habitat Degradation-waste generated may be a hazard to wildlife and cause pollution.	*Implement a Wildlife Management Plan. *Implement an educational training programme for workers to follow as a way to manage wildlife. *Prohibit hunting within the area.	2	Low
Traffic and Transport	Traffic Congestion and/or accidents	Traffic accidents	*Implement pedestrian routes that will: - Be clearly separated from vehicle routes by fencing and/or a kerb, or other suitable means. - Be wide enough to safely accommodate the number of people likely to use them at peak times.	5	Low

Significant Aspect and Impact	Activity	Potential Impact	Environmental and Social Management Strategy	Risk Score	Magnitude Score
			- Allow easy access to relevant local work, tourist and residential areas. - Be kept free of obstructions. - Be clearly and suitably signed. *Implement vehicle routes that will ensure that: - Are wide enough to safely accommodate the number of vehicles likely to use them at peak times. - Allow easy access to delivery areas. - Are free of obstructions and are clearly and suitably signed. - Eliminate or reduce the need for reversing. - Provision of suitable parking areas.		

9.0 ENVIRONMENTAL IMPACTS AND MITIGATIONS

9.1 Physical Environmental Impacts

9.1.1 Groundwater Quality

During both demolition and construction activities it is important to protect the groundwater quality. Potential impacts to the groundwater can be fuel spills, oil spills and liquid waste leakage. This demolition sources of potential impacts are portable potties, heavy equipment and any on-site refueling.

To help mitigate any concerns that may occur, the main source of potential releases during the demolition and construction phases will be identified prior to the commencement of all works. There are to be no storage of large quantities of fuel or hazardous wastes on site. The construction heavy equipment vehicles being used on and around the site should be given special attention. A maintenance schedule and log will be used to ensure that if any leaks develop, the use of that vehicle is discontinued and fixed before a large volume release occurs into the environment. An area will be designated as the permanent maintenance location and will be prepared with an appropriate containment.

During the construction phase the maintenance laydown area should be located away from the retained vegetation and not positioned on a hill or slope. This area will be prepared by first removing two feet (2 ft.) of the ground material, following that a covering of an impermeable material, then it should be filled with fill material and berm to contain any possible spills. The Fuel Spill Prevention Plan (See Appendix D) will be implemented for any spills that arise. Oil spill kits should always be kept nearby or within heavy equipment.

As construction progresses the negative impact on groundwater quality increases from dewatering for utility trenching. Utility installation will require trenching efforts throughout the site. Excavations may encounter water which require pumping. If this occurs water must be expelled away from any from vegetation, open water bodies and exposed groundwater.

Mitigation measures related to liquid waste leakage is discussed Section 9.1.5.

9.1.2 Flooding

Flooding will be a concern during the construction and operational phase of the proposed project. The Project site may be prone to flooding because of its low-lying terrain.

Several activities during the construction phase have the potential to create flooding, this includes excavation for utilities trenches and rainwater storage.

The Project will consists of impermeable surfaces such as buildings, and roads, which can result in an increase in the amount and rate of water entering the proposed drainage system.

To help mitigate the effects of flooding, several measures will be implemented:

- The development of a twenty thousand (20,000) gallon catchment pit and drainage system to store water from rainfall.

- During operations the catchment pit and drainage system are properly maintained.
- Stored water within the system will be filtered and incorporated within the water utility system of the facility.
- Creation of green spaces via landscaping to preserve permeable areas and optimize water absorption.

See Appendix E for Water drainage and Storage Plan.

9.1.3 Solid Waste

The site is located in Western New Providence with an organized and managed waste management system located at New Providence Ecological Park (NPEP). The Project should seek to reduce the production of waste and recycle material as much as possible. Waste bins should be provided and secured on site and emptied on at least a weekly basis.

There is the potential for hazardous waste impacts associated with the construction and operational phases. All equipment and hazardous material will be stored in designated locations to reduce the risk of spills and pollution events. All hazardous waste should be disposed of by licensed contractors and according to DEHS protocol. Waste tickets should be collected when hazardous waste is disposed of (See Appendix B-2: Hazardous Waste Report Form).

Vegetative waste will be created during the renovation of the site. Natural vegetation may be mulched and reused in landscaping, but the invasive species should be sorted separately and disposed of. The use of invasive species in mulch will promote the spread throughout the site so they should be disposed of according to the Invasive Species Management Plan. The trees maybe carefully cut and treated with herbicide, removed manually or by heavy equipment. All the accumulated debris should be handled properly and ensure that all seedlings are removed.

9.1.4 Air and Noise Pollution

Air Pollution

Demolition and construction activities will be extensive, and as a result dust will accumulate on site in work areas. This dust has the potential to be a hazard to human health and can cause eye irritation and respiratory issues. The surrounding vegetation and community can also be affected as well, with dust coating structures, leaves and produce. To reduce the impact of dust, the following activities should be implemented:

- Screening and fencing should be used to reduce wind, improve aesthetics, and mark the limit of works.
- Clearing should only include the footprint needed for construction of the site.
- Water is to be used as a dust retardant as needed.
- The use of Proper Protective Equipment (PPE) including dust masks and eye wear/safety glasses.
- Dump trucks moving loose material are to be covered with tarpaulins.

Noise Pollution

The Project activities will increase the level of noise that will affect nearby businesses and residences. The general rule shall be that construction operations be restricted to daylight hours between 0700 hrs. and 1900 hrs. Any reason to work outside these hours to speed up the progress of works, local communities will be given advance notice and specific requests will be reasonably accommodated.

9.1.5 Sewage and Waste Refuse

The improper disposal or treatment of human waste can result in a breathing ground for diseases. During the demolition phase, portable potties will be distributed throughout the site and will require weekly maintenance. A licensed contractor will be responsible for the servicing the porta potties and collection of human waste. Portable toilets should be placed one hundred and fifty (150) feet away from any exposed groundwater and will be removed from site during hurricanes or threatening bad weather events to prevent them from turning over.

There will be no drainage of sewage or wastewater into the sea or any natural water bodies on or near The Project site at any time.

9.1.6 Traffic Impacts

Project activities have the potential to negatively affect traffic flow as a number of businesses are located both near and adjacent to The Project area. The increase in vehicular traffic, movement of heavy machinery and change in traffic patterns can cause impacts to the safety of road users (vehicular and pedestrian) and cause discomfort to the community.

To mitigate the traffic impact, notice should be given to the community of the commencement of work and possible traffic inconveniences; signage will need to be placed on the main thoroughfare and flagmen should be placed strategically at the site's entrance and exit to direct activities. See Appendix F for Traffic Management Plan.

9.2 Impacts on the Natural Environment

9.2.1 Impacts on Vegetation

The development will require vegetation removal, which includes protected species. To mitigate the loss of the vegetation, protected species within The Project area should be carefully removed and transplanted. Permits for removal and transplantation should be obtained from the Forestry Unit before commencement of any work. The landscape palette should have an integration of native species mixed with ornamentals, which will include protected species present on the site. This native population will be sourced locally, to help maintain the native genetic plant diversity. The design of the landscape will be low impact and based upon xeriscape principles which will reduce and help eliminate the need for irrigation maintenance.

Invasive species within the interior of the site will be manually removed. Proper disposal of debris from the invasive species removal exercise is critical in preventing the spread of invasive species to other areas of the site. Improper disposal of branches can spread seeds to parts of the island that do not have invasive species. Thus, all organic plant material will be collected, and transfer to NPEP separate from domestic solid waste.

In addition to removing existing invasive species and ensuring that there is no spread of invasive species from the removal exercise, there will be no introduction of new invasive species to the site as a result of The Project. Biosecurity protocols to prevent introduction of invasive species to the site will involve the following preventive measures:

- No invasive species will be allowed on the landscape palette.
- Local procurement of plants will be a first option for landscaping palette.
- Upon arrival and offloading of plants, a plant inventory and inspection will be conducted to ensure that plants present are as per the approved landscape palette.
- All invasive plant material will be removed off site.

9.2.2 Wildlife Impacts and Management

During the construction phase, as well as the operational phase, great effort should be placed on observing the presence and management of all wildlife on site.

The following actions should be implemented to ensure management of wildlife present at the site:

- All Site Inductions will include guidance on how to deal with wildlife encounters, including any species at risk that may be present, and arrangements for dealing with injured or orphaned wildlife. This guidance should be summarized in a handout suitable for quick reference by on- site staff and be available in areas that all employees on site will have access to.
- Prior to clearing vegetation, the EM or wildlife specialist will schedule inspections for wildlife, installation of protective fencing, pre-stressing, and onsite briefings for Contractors.
- Areas of retained vegetation should be identified and clearly marked with fencing and signage.
- A site map should identify areas prone to wildlife appearance and areas that should be avoided, if possible, to prevent disturbing of habitat.
- Clearing of pathways for greenspaces are to be cleared manually and not by heavy equipment.

10.0 HEALTH AND SAFETY STATEMENT

10.1 Health and Safety

The Site Engineer (SE) will be designated as the site Health and Safety Officer (HSO) and the Foreman as acting HSO in SE absence. Basic first aid training of these persons will be required. There shall always be a fully equipped first aid box at all work sites and a list of local emergency telephone numbers in case of accident (See Appendix C: Emergency Response Plan). Minor and major accidents shall be recorded (See Appendix B-1: Incident Report Form).

The Contractor shall ensure that all staff, including Sub-contractors, undergo safety training and inductions. These training events will educate workers on the best practices for working (to include but not limited to):

- With hazardous materials,
- At heights,
- In confined spaces,
- Welding safety (hot works),
- With heavy equipment,
- Emergency procedures,
- Confined spaces,
- Excavation and safe digging practices,
- Lifting operation and lifting equipment,
- Plant, vehicle and equipment – checking procedures,
- Site / road traffic rules and requirements,
- Site security arrangements, and
- Vehicles – safe driving practices and checklists

Toolbox Talks

At the HSO's discretion regular "Toolbox Talks" will be conducted after the initial Site Induction. The Toolbox Talks will include information on some or all of the topics listed above depending upon the site-specific conditions:

A Toolbox Talks form / Site Induction register form shall be completed for each talk and shall contain the following information: -

- Supervisors Printed Name & Signature,
- Date,
- Site/Project Name,
- Topics of Talk, and
- Printed name and signature of each operative attending.

Site Rules

Site-specific rules will be posted within the canteen / office and copies will be given to all personnel working on the site. They will contain, for example, details of No Smoking requirements, dress code, PPE requirements, emergency arrangements etc.

Site Inspections

The Site Engineer/Safety officer will inspect sites for compliance with approved working methods and contractual requirements. The Bahamas labour laws, and occupational health and safety policies shall always be applied.

The emergency assembly site should be identified before works begin and relayed to workers on site during Site Induction and Toolbox Talks. In case of any emergency the staff will meet in this area, away from the building and near the site exit for easy evacuation.

Worker Health and Safety

A health and safety policy for site workers should be established by the Contractor prior to the commencement of works. The Contractor should ensure that the policy is readily available for all workers on site and encompasses the following mitigation measures to prevent an incident from occurring:

- Construction/Renovation areas should be clearly defined with safety signs and barriers to prevent possible incidents.
- Routine checks of health and safety equipment should be performed to ensure that they are properly functioning.
- All Workers should be properly trained in the proper use of construction equipment.
- All workers must be trained in the proper use of all health and safety equipment.
- All workers must be trained in the proper handling and management/ disposal of all types of waste.
- All workers are to be provided with suitable and sufficient hygiene and welfare facilities e.g. rest rooms, lunch spaces, lockers, toilets, first aid, clean drinking and washing water, etc.
- All equipment and machinery shall be maintained in a good state of repair throughout the renovation period
- Equipment maintenance will be carried out on an impermeable surface
- Regular inspection and repair of all equipment and machinery will be carried out to prevent any leakage

Use of Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE) including protective suit, gloves, hard hats, respirators, and goggles shall be worn in areas designated for their use. At all times work sites shall be maintained in an orderly, safe, and tidy state. Precautions against fire accident shall be taken and appropriate fire safety equipment supplied and clearly indicated at work sites.

11.0 EMERGENCY RESPONSE PLANS

11.1 Fuel Spill Prevention Plan

The Spill Response Plan was developed for the use of all Contractors and Sub-contractors, to prevent and control any spillage associated with The Project in accordance with Environmental, Health and Safety regulations. The Fuel Spill Prevention Plan is located in Appendix D.

11.2 Emergency Response Plan

Emergencies associated with The Project may include fires, explosions, storms, health and safety, and malfunctions. The Emergency Response Plan is detailed in Appendix C.

APPENDICES

Appendix A: Project Drawings

Figure 1-1: The Project Site Plan Conceptual Design

Figure 1-2: The Project Ground Floor Plan Conceptual Design

Figure 1-3: The Project Second Floor Plan Conceptual Design

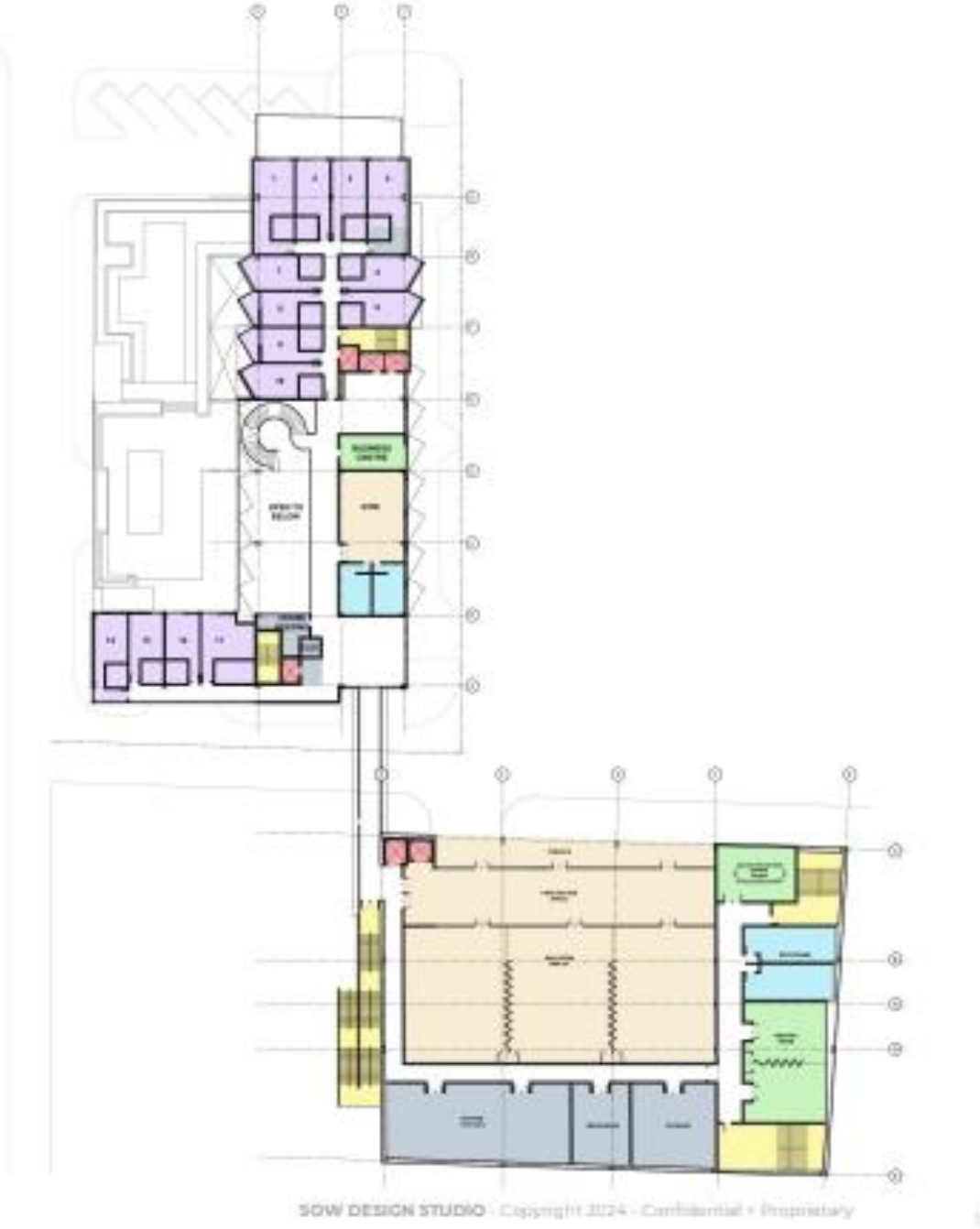

Figure 1-4: The Project Third Floor Plan Conceptual Design

Figure 1-5: The Project Roof Top Plan Conceptual Design

Appendix B: Environmental Monitoring Documents

Appendix B-1: Incident Report Form

JSS CONSULTING	**Incident Report Form**		
Date of Incident:		**Time of Incident:**	
Type of Incident (mark 'X' next to appropriate option below)			
Chemical Spill	Excessive air emission	Sediment	Health & Safety
Sanitary Spill	Vegetation Damage	Flood	Excessive Noise
Excessive Odor	Waste Management	Fire	Fauna Injury
Details of Incident:			
Response to Incident:			
Measures to prevent reoccurrence:			
Name:		Position:	
Signature:		Date:	

Appendix B-2: Hazardous Waste Report Form

Hazardous Waste Report Form	
Date of Incident:	**Time of Incident:**
Reporting's Party Name:	
Position:	
Address/Island:	
Phone:	
Description of Hazardous Material (including name and any unique formulas identifiers (UFI's for the containers):	
Weight or volume of material disposed of:	
Location where material was collected:	
Location where material was disposed of:	
Summary of disposal methods:	
Name of Licensed Contractor:	**Position of Licensed Contractor:**
Signature of Licensed Contractor:	**Date of Disposal:**

Appendix B-3: Environmental Monitoring Checklist

JSS CONSULTING Environmental Consulting Services	**Environmental Monitoring Checklist**			
Site description:		**Location:**		**Weather Conditions:**
		GPS Coordinates:		
1	**Site Safety and Health**	**YES**	**NO**	**Comments/ Prescribed Corrective Actions**
a	Is personal protective equipment used appropriately?			
b	Are there proper safety requirements for work sites near water?			
c	Are there proper safety requirements for works at heights?			
d	Are open pits secured with caution tapes and or cones?			
e	Is there adequate fresh drinking water available? Shade provided			
2	**Waste Management**			
a	Are appropriate waste storage containers being used and properly labelled?			

b	Are litter bins conveniently placed throughout the site?			
c	Is waste collection needed?			
d	Is hazardous waste separated in laydown area?			
e	Are there solid waste ticket receipts for landfill disposal of onsite waste?			
3	**Air Quality Management**			
a	Are speed restrictions of 15mph adhered to?			
b	Are equipment properly maintained to reduce emissions?			
c	Are dust suppression mechanisms implemented?			
4	**Material Storage**	**YES**	**NO**	**Comments/ Prescribed Corrective Actions**
a	Are material in storage area secured to prevent airborne debris?			
b	Are fill stockpiles located more than 100 feet from open water?			
c	Is silt fencing installed around the perimeter of fill stockpiles?			
5	**Groundwater Management**			

a	Is refuelling on concrete apron or lined fuel pad in case of spillage?			
b	Are fuel and oil storage on concrete apron or lined containment pad in case of spillage?			
c	Are fuel and oil storage containers free from leaks or signs of corrosion?			
d	Is there adequate secondary containment for fuel and oil storage units?			
e	Are secondary containment covered to prevent ingress of rainwater?			
f	Are mobile machine repairs and maintenance on concrete apron or lined containment pad in case of spillage?			
g	Are all mobile machinery in use free from engine lubrication and oil leaks?			
	Is spill response equipment on site and easily accessible?			
h	Is cement storage on concrete apron or lined containment pad?			
I	Is concrete washout established and appropriate with liner installed?			
j	Are there any excavations with exposed groundwater?			

k	Is fuel and oil storage a minimum of 100 feet from any excavations with exposed groundwater?			
l	Is refuelling operations a minimum of 100 feet from any excavations with exposed groundwater?			
6	Portable Potties/Restroom facilities	YES	NO	Comments/ Prescribed Corrective Actions
a	Are facilities conveniently located?			
b	Are units clean and stocked with supplies?			
c	Are there proper disposal bins for feminine sanitary waste?			
d	Are the units on concrete apron or lined containment pad in case of spillage?			
e	Are units a minimum of 100 feet from any excavations with exposed groundwater?			
f	Are units a minimum of 100 feet from waterbody?			
7	Protection of Waterbodies & Sediment Control			
a	Is silt fencing adequately placed, properly installed and maintained?			

b	Are turbidity curtains adequately placed, properly installed and maintained?			
c	Is there any turbidity observed outside turbidity curtain containment area?			
d	Is there any oil or grease observed?			
e	Are there poor water quality indicators, i.e., algae growth, dead marine life?			
f	Is fuel and oil storage, a minimum of 100 feet from waterbody?			
g	Is refuelling operations a minimum of 100 feet from waterbody?			
h	Is there any plastic or other solid waste in water?			
I	Is marine organism spotter in place prior to marine work?			
8	**Vegetation**	**YES**	**NO**	**Comments/ Prescribed Corrective Actions**
a	Has protected trees been maintained or relocated?			
b	Are invasive species removed?			
c	Is native vegetation used in landscaping?			

d	Is there build-up of dust on vegetation?			
9	**Noise**			
a	Is there excessive noise on site? Complaints?			
b	Construction signs visible?			
c	Is there proper lighting available?			
d	Is access being controlled to ensure that only authorized persons are being allowed onsite?			
Inspected by:			**Signature:**	
Date:				
I, the Contractor's Representative, have read, understood, and affirm to the conditions and remarks cited by the above Environmental Manager.				
Name:			**Signature:**	
Date:				

Appendix B-4: Monthly Environmental Report Template

MONTHLY ENVIRONMENTAL REPORT TEMPLATE

1.0 OVERVIEW

Indicate report period and construction activities during period.

2.0 SITE INSPECTION

Summarize observations made during site inspections for each monitoring parameter indicatedon the site inspection sheet. Include site inspection sheets for the period as an appendix to this report.

3.0 REPORTS &COMMUNICATION

Provide details on reports submitted during this period including and NCR, Incident Report, Fuel Spill Report, Turbidity and Grievance Monitoring Reports. Attach copies of reports as an appendixto this report.

Summarize communication with relevant agencies including Department of Environmental Planning & Protection, Department of Environmental Health, Department of Marine Resources and incidents logged into the BESTPROTECT242 APP.

4.0 MEETINGS

Record any meeting during this period where environmental management matters were discussed including construction progress meetings, meetings with the Contractor to addressspecific environmental matters and meetings with government officials. Minutes of meeting should be included as an appendix to this report.

5.0 TRAINING

Provide details on all training exercises conducted during this period including site inductions and toolbox talks. Register of individuals undergoing training should be included as an appendix tothis report.

6.0 STAKEHOLDER ENGAGEMENT

All stakeholder engagement activities during the period should be included and the update stakeholder engagement log attached as an appendix to this report.

Appendix B-5: Non-conformance Report Template

Nonconformance Report Form

SECTION 1: COMPLETED BY THE ENVIRONMENTAL MANAGER

NCR No.	**Specific:**
Contractor:	
Activity:	☐ Site Safety
Non-Compliance: ☐ Environment ☐ Health &Safety	☐ Groundwater Management
Details:	☐ Sediment Control
Details of Nonconformance observation (Attach photos on separate page)	☐ Vegetation
	☐ Marine Environment
	☐ Waste Management
	☐ Air Quality
	☐ Other

Recorded by:	
Signature:	Date:

SECTION 2: COMPLETED BY THE CONTRACTOR (*returned to Environmental Manager)*

Contractor's response, intended method and date of repair

SECTION 3: CLOSE OUT

Correction Completed and Report Closed Out:

Environmental Manager		Date:	
Contractor's Representative		Date:	

Appendix C: Emergency Response Plan

This Plan is designed to address the most likely emergencies which will occur on site.

1.0 Purpose

The purpose of this plan is to coordinate the response of the workers to a situation that may risk the safety of workers, the general public, the community, and the environment. It should be noted that, where applicable, any National Emergency Response Plan will supersede this plan. The Contractor should anticipate and prepare in general for the following scenario:

- Serious personal injury/fatality,
- Road traffic accident,
- Fire or explosion,
- Spillage of fuel or hazardous substance,
- Severe weather conditions (Hurricanes, Tropical Storms, Tornadoes, Floods),
- Loss of utilities,
- Evacuation of work site; and
- Damage to Third Party Property.

Priority for action of each scenario is as follows:

1. Saving lives and people safety.
2. Avoid or limiting environmental damage.
3. Control of situation.
4. Establishing site safety; and
5. Salvage and repair.

2.0 Roles and Responsibility

A select group of individuals will form an Incident Team, which will respond to all emergency and disaster situations. This team should comprise of the Project Manager (PM), Site Engineer (SE), Foreman, Health and Safety Officer (HSO), Environmental Manager (EM)/Environmental Monitor (EMO), and if necessary, relevant Government Agencies.

The Incident Commander (IC) is the highest-level administrator and will report to all emergencies. In the event of an emergency requiring the assistance of Government Agencies, the Government representatives will assume the responsibility of the IC. For situations which do not require Government Agency involvement, the IC will be the Contractor's representative for The Project or the PM. The IC is also responsible authorizing reentry into a site after evacuation and for ensuring that an incident reporting form is completed for every incident on site as described in this Emergency Response Plan. Copies of completed incident reporting forms should be kept on site and made available to government officers if requested during an inspection. Any incident reporting forms should be submitted along

with monthly environmental monitoring reports submitted to the Department of Environmental Planning and Protection (DEPP).

Site managers/supervisors will maintain a current list of workers and their contact information. Site managers are responsible for evacuating staff of affected areas as necessary and to account for all staff.

3.0 Emergency Procedures

All emergencies should be brought to the attention of the on-site emergency team. This will then decide which response is needed and implement it.

The Contractor and all Sub-contractors shall maintain a current list of personnel and their contact information on site. This list will be made available to the IC upon request. Emergency drills will be planned and conducted with construction staff on site as needed. All incident reports should be submitted along with monthly environmental monitoring reports submitted to DEPP.

The following terms and corresponding emergency contact numbers must be used to report or declare an incident.

Emergency Agencies

Fire Department – Tel. 919
Ambulance Department – Tel. 919
Police Department – Tel. 919
Princess Margret Hospital (PMH) – Tel. (242) 322-2861
Doctor's Hospital – Tel. (242) 302-4600

Administrative Agencies

Port Department – Tel. (242) 326-7354
Bahamas Power and Light – Tel. (242) 302-1000 or (242) 323-5561 thru 4
Bahamas Power and Light – Tel. (242) 325-0505 or (242) 325-4504 (24 hours)
BTC Telephone Repairs – Tel. (242) 225-5282
Water and Sewage Corporation – Tel. (242) 302-5500
Department of Environmental Planning & Protection – Tel. (242) 322-4546
Department of Environmental Health Services – Tel. (242) 322-8037 or (242)322-2295
Department of Meteorology – Tel. (242) 356-3734 or (242) 356-3736
Hurricane Forecast Section – Tel. (242) 377-7178 or (242) 377-7040
Royal Bahamas Police Force – Tel. 919 or 911
Water and Sewerage Corporation – Tel. (242) 302-5599
Ministry of Works, Director – Tel. (242) 322-4830/1
Ministry of Health (COVID-19 Surveillance Unit) – Tel. (242) 502-7382

On-Site Emergency Team will be comprised of the following:

- Incident Commander (IC): Project Manager – TBD
- Alternative Incident Commander: Site Engineer – TBD
- Health and Safety Officer – TBD
- Environmental Manager – Janeen Bullard Tel. (242) 357-9262

4.0 Hurricanes Preparedness Plan

Please follow the Hurricane Preparedness and Response Plan.

The Hurricane Preparedness Plan serves the purpose of a guideline for Contactors before, during and after the hurricane, while providing background information, it is detailed to ensure minimum damage and shutdown time. Hurricane season runs from June 1 to November 30 each year.

The following notifications determines the actions to be implemented:

- Hurricane/Tropical Storm watches mean that a hurricane or tropical storm is possible in the specified area.
- Hurricane/Tropical Storm warnings mean that a hurricane or tropical storm is expect to reach the area, typically within 24 hours.

The Contractor is required to prepare before a severe weather event, ensuring all equipment and structures are secure before a storm.

The PM and Site Engineer (SE) are to monitor both local and international weather services closely once a Tropical Storm Watch is issued.

Once the National Weather Service issues a Hurricane Watch, it is time to secure structures and equipment on the site for the storm by implementing the following actions:

- Begin to sort and transport waste off site.
- Cover materials/equipment to prevent water damage.
- Large stock of materials should be secure to prevent them from dispersing.
- Mobile equipment remaining on site should be parked on a flat, impermeable surface.
- Complete work on partially completed structures to minimize damage if time allows.

After a Hurricane Warning is announced the following actions should be implemented:

- Loose materials or equipment should be moved or secured.
- All dumpsters should be picked up or covered with tarp.
- Clean and remove or anchor down portable bathrooms.
- Remove hazardous chemicals off site.

- Remove materials, tools, or equipment that can be damaged by rising water.
- Move heavy equipment and machinery to a garage or other covered structure.
- Dismantle and store light-weight fence screens and job site signage.
- Move any portable electronics, job site plans, and other important documents from the construction trailer to a safe location offsite.
- Turn off power to the site.
- Secure site after all personnel are off site.

Once all clear has been given after a storm the PM and SE may return to the site to assess damages and determine cleanup efforts. Upon returning to site the following steps are to be taken:

- Be careful when walking in standing water, which may contain sharp or jagged objects.
- Use caution when entering the building because structural elements may be weakened.
- Rent a dumpster to safely dispose of materials that were damaged by the storm.
- Plan to remove water. During a hurricane, water will inevitably flood your work site. Removing it is important for the safety of your property and neighboring structures. Standing water can soften the ground, compromising structural stability.
- Discharge water to the storm water system or into the deep wells.

The Hurricane Plan should be communicated to staff prior to the start of hurricane season and a briefing held by the PM once it is determined that severe weather is eminent. Hurricane preparedness is essential for a safe construction site.

5.0 Summary of Potential Emergencies and Responses

In the event of any emergency the Site Engineer must be contacted to ensure the appropriate action is taken. For each of the incident, an Incident Report should be filled out and included in the monthly report. A list of potential emergencies and responses are outlined in Table 1 below.

Table 1: Summary of Potential Emergencies and Responses.

Table 1 Key:

SE = Site Engineer
HSO = Health and Safety Officer
PM = Project Manager
EM = Environmental Manager
EMO = Environmental Monitor
DEHS = Department of Health Services
DEPP = Department of Environmental Planning and Protection

Potential Emergency	What To Do?	Relevant Authority and Persons
Injury caused by: Fire Explosion Machinery accidents	*For serious injuries call an ambulance. You should also have the contact details of the nearest doctor, Medical Center or Hospital.	• Foreman • SE • PM • HSO
Minor Injuries	*Immediately inform the site First Aid Officer. (All Foremen and the Project Engineer are First Aid Trained). *For major injuries contact the 911, hospital, SE and PM.	• PM • SE • Police Station • Hospital
Fires: • Fire at the diesel tank. • Fire at any of the machineries. • Fire caused by vandalism.	*Evacuate all workers to a safe area immediately. *Call the Fire Department (Emergency Services). *If the fire is likely to damage neighboring property inform the adjacent residents. *For major fire emergencies, contact the SE or PM (Note: Fire Extinguishers are available).	• Foreman • SE • PM • Fire Department (911) • Adjacent resident
Explosion	*Evacuate all workers to a safe area immediately. *Call the Emergency Services immediately. *Contact the neighboring residents. *If utilities related, call the relevant service provider (e.g., BPL). *Contact the SE or PM	• Foreman • SE PM • Police Station and/or Fire Department (911) • Adjacent Residents
Spills Management, Contaminated Soils & Major Spills: • Spill or release of diesel fuel or oil. • Spill or release of other	* For major spills, (defined as a spill that is likely to have direct environmental consequences.) refer to Fuel Spill Prevention Plan (Appendix D). *Immediately call the Fire Department and notify SE.	• EM/EMO • Foreman • SE • PM • Police station and/or Fire Department (911)

hazardous chemicals or material.	*Identify the source of the spill. If the material is dangerous or unknown, evacuate the site immediately and notify all neighbors. *If it is safe, halt the source of the spill immediately. *Contain the spill and control its flow. Block storm water drains downstream of the spill. *DEHS and DEPP must be notified about any spills that are likely to threaten the environment.	• DEPP • DEHS • Adjacent Residents
Minor Spills	*Minor spills (defined as spills which can be contained and rectified correctly without the need of external services), shall be contained and rectified with the site spill kit and disposed of correctly. *PM to be notified via incident report.	• Foreman • SE • PM • EM/EMO
Heavy Rainstorm, Flood and/or Hurricane	*Contain/minimize the flow of water. *Contact PM and/or SM immediately. *Investigate reasons for failure and prepare an incident report.	• Foreman • SE • PM • Police Station (911) • Adjacent • residents
Rupture of Utility Pipelines (Telecommunication Lines, Water and Sewerage Pipes, Electrical Lines and Cable Lines)	* Contact Relevant Agency or Utility company. *Ensure all spilled materials are contained onsite. *Block storm water drains downstream of the spill. Spills or ruptures that are likely to threaten the environment.	• Foreman • SE • PM • Police Station (911) • Adjacent • residents
Site security, breach or public safety issue	*Notify security and/or police immediately. *Where public safety issue exists, barricade to restrict egress and address issue immediately.	• SE • PM • Foreman • Police Station (911)

Appendix D: Fuel Spill Prevention Plan

The following Spill Prevention and Response measures will be implemented to prevent or mitigate escalation in the event of a possible spill.

SPILL PREVENTION MEASURES

The following proactive measures will be adopted to prevent the likelihood of spill event:

- The Health and Safety Officer (HSO) will provide training to construction staff and Contractors regarding proper methods for transporting, transferring, and handling substances that have the potential impact to human health or the environment.
- Preventative program including inspection and maintenance schedules to confirm and maintain the mechanical integrity and operability of equipment.
- Implementation of Standard Operation Procedures (SOPs) for handling materials including refueling vehicles, the use of diesel/oil absorption blankets, the use of diesel tanks, the use and handling of processing chemicals, and managing secondary containment areas.
- Fuel will be purchased locally and immediately transferred to vehicles on site using a fuel pump. No fuel will be stored on site.
- Provision of secondary containment, drip trays or other overflow and drip containment measures, for hazardous materials containers at connection points or other possible overflow points. Identification and provision of all equipment necessary to handle, transfer or transport materials properly.
- Use of transfer equipment that is compatible with and suitable for the characteristics of the materials transferred and designed to ensure safe transfer.
- Use of dripless hose connections for vehicle tank and fixed connections with storage tanks.
- Review of all potential pollutants' characteristics prior to introduction to site and establishment of proper storage, handling and transportation procedures and spill risk analysis.
- Material Safety Data Sheets (MSDS) for all contaminants on-site will be readily available. These will include human health effects of chemicals handled and will be included in the required chemical environmental and safety training for all employees handling or otherwise exposed to the contaminants. All appropriate Personal Protective Equipment (PPE), handling and response procedures will also be identified in the MSDS or otherwise recommended by the suppliers/manufacturers and will be followed by The Project staff.
- Bulk transfers of chemicals during delivery will be observed by workers to identify preliminary hazards.
- SOPs will be adhered to for chemical transportation, unloading, transfer, storage (if required), and handling. Use and disposal shall be developed, kept current, effectively implemented.

SPILL CONTROL AND COUNTERMEASURES

The following spill control and countermeasures will be followed in the event of a spill incident:

- Maintenance of updated emergency contact information list at all spill response kit's locations.
- Maintenance of spill route maps (perceived overland flow path [flow gradient] and likely contamination point [i.e., surface water features, potable boreholes etc.] of a given contaminant substance) at potential spill locations.
- Document availability of all spill response equipment that can handle a large spill (See Appendix D-1: Spill Report Form).
- Document availability of specific personal, protective equipment, and the necessary training needed to respond to different potential spills.
- Maintenance of spill response kits on all Project fuel and lubrication sites and vehicles.
- Maintenance of spill response guidelines at all spill response kit locations.
- Maintenance of an updated table of all contaminants on-site and recommended spill response procedures.
- Development, implementation, and regular training and testing of a facility-wide Spill Response Plan.
- First-aid trained workers on site.
- All spills will be reported to appropriate management workers.

SPILL RESPONSE PROCEDURE & COMMUNICATIONS

The Spill Response Procedure describes what to do when you see a spillage occur.

The Project Manager (PM) is responsible for notifying the Environmental Manager (EM) immediately on the discovery or notification of a spill, that Emergency arrangements are made, and communication lines are established with relevant agencies and authorities.

The PM is to ensure that employees on The Project are aware of the emergency telephone numbers, addresses, and response procedures. Furthermore, the PM ensures, either via the local agent or direct, that Department of Environmental Planning and Protection (DEPP) and the local authorities are made aware of the existence of The Project. ALL spills are to be reported to DEPP.

WHEN YOU SEE A SPILLAGE OCCUR

1) Check
   a. type of spillage (fluid / solid)
   b. estimate quantity
   c. spillage continues (If Yes, take action to stop it / If No proceed)
   d. source of spillage
   e. danger of explosion (If Yes, ask for assistance / If No proceed)
   f. danger of fire (if Yes, ask for assistance / if No proceed)
2) Ask for assistance
   a. when possible, start spillage recovery
3) Inform Project Manager, Project Environmental Manager

Superintendent/Foreman
Minor spillage: can be treated with available spillage recovery set
Major spillage: assistance is required

MINOR SPILLAGE

Superintendent or Foreman:

1. To stop and / or take over activities

Superintendent or Foreman:

Log on daily report

a. type of spillage
b. estimated quantity
c. reason of recovery
d. cause of spillage
e. measures (to be) taken to avoid reoccurrence

1. Inform Project Manager within **24hrs.**

(Should be address immediately and remediation within 12hrs)

MAJOR SPILLAGE

Superintendent or Foreman:

1. Check Location-**immediately**
   a. Ensure safety
2. Check Spillage-**immediately**
   a. type of spillage
   b. estimated quantity
   c. spillage continues
3. Instruct workers-**immediately**
   a. To stop and / or take over activities
   b. To start spillage recovery
4. Inform Project manager, Environmental Manager **Within 1 hr.**
5. Tactic Meeting with key workers

Project Manager or Project Environmental Manager:

1. **Immediately** determine what kind of assistance is required
2. Inform ENGINEER **within 1hr of notification**
3. ENGINEER to inform Employer **within 1 hr. of notification**
4. Request assistance from 3rd Parties **within 1 hr.**
5. Inform DEHS & DEPP-**verbally in 1hr, written within**

EMERGENCY RESPONSE EQUIPMENT

In the unlikely eventuality there is a spill, on the site there will be Environmental Emergency Response kits. These spill kits will consist of the following listed materials (or similar):

- Absorption pads (43 x 48 cm).
- Absorption rolls (96 cm x 40 m).
- Spill drum for contaminated materials.
- Absorption socks (7.6 cm x 1.2 m).
- Sack of absorption grit.
- Plastic foil.

Once an eventual spill has been cleaned-up all contaminated materials will be packed in plastic sacks and / or foil and placed in the disposal drum. This drum will be transported to an eventual waste recycling / treatment facility or to a location approved by the DEHS and/or New Providence Ecological Park (NPEP).

EMERGENCY PREPAREDNESS

The Contractor should anticipate and prepare in general for the following scenarios:

- Serious personal injury/fatality.
- Road traffic accident.
- Fire or explosion.
- Spillage of fuel or hazardous substance.
- Severe weather conditions (Hurricanes, Tropical Storms, Tornadoes).
- Evacuation of work site; and
- Damage to Third Party Property.

Priority for action of each scenario is as follows:

1. Saving lives and people safety.
2. Avoid or limiting environmental damage.
3. Control of situation.
4. Establishing site safety; and
5. Salvage and repair.

SPILL REPORTING PROTOCOL

Step 1: All workers on the work site and assigned to The Project will be responsible for implementation with the PM and EM providing coordination of efforts. A report will be generated by the Contractor and disseminated to relevant parties including DEPP.

Emergency Contacts:

Project Manager

TBD

Environmental Manager

Janeen Bullard

1-242-357-9262

Director of DEPP

Rhianna Neely-Murphy,

1-242-322-4546

Department of Environmental Health Services

Anthony Ryan

1-242-557-0379

Step 2: When contact is made with the above individuals, report the following information (See Appendix D-1: Spill Report Form):

- Location of Spill.
- Source of Spill.
- Time of Spill.
- Volume of Spill.
- Potential Hazard of Spill.
- Has the spill been contained?
- Has the spill material reached a body of water?
- Responsible party's name, address, telephone, official to contact, etc.
- Weather conditions at the spill site.

Step 3: If the spill report is not made by the PM, the reporter will communicate the above information to him/her as soon as possible. From that point forward, the Project Engineer will coordinate all further activities in response to spill control.

SPILL CONTAINMENT AND CLEANUP

Upon discovering a spill, every effort will be made to contain the spill and stop it at its source (when this can be done without danger to the health and safety of those involved).

Containment may involve blocking storm water drains, building berms/dikes, deploying booms/absorbent materials and other barriers to prevent the spread of the pollutant, and other measures to minimize health and environmental damage.

Clean-up and removal of spill material and spill contaminated materials will be undertaken after consultation with appropriate governmental agencies to determine the best method(s) for removal. The Contractor will contract with (or consult) a private company to conduct any clean-up. Disposal of the pollutant and/or pollutant contaminated material will be in a manner and location as approved by the DEHS and/or New Providence Ecological Park (NPEP).

Appendix D-1: Spill Report Form

Spill Report Form

Reporting Party's Name			
Address/City/State:			
Phone:			
Responsible Party's Name:			
Address/City/State:			
Phone:			
Date of Spill		Time of Spill:	
Location:		Product spilled:	
Estimated Quantity		Discharge stopped or contained?	Y/N
Source or cause of Spill:			
Action Take:			
Injuries/fatalities/evacuation			
Environmental Damage:			
List of equipment used:			
Disposal site/facility for used absorben			

Spill Notifications

Organization	Phone Number	Time Contacted	Case Number
Fire Department			
Spill Response Contractor			
Department of Environmental Planning and Protection			
Department of Health Services			

Preventative actions taken

**Note: Please attach a map of spill location

Appendix E: Drainage System Plan

Water Drainage and Storage

The drainage system will collect and filter rainwater from buildings and ground surfaces, to be used throughout the property during the operational phase for showers, toilets, and landscaping. Water that is collected from drainage basins will be conveyed to an underground catchment system located on the proposed project site. The underground catchment system will consist of one (1), twenty thousand (20,000) gallon storage tank that will accommodate for the fast rate of water flow as well as prevent overflow of water during the catchment process.

Filtration

The water that is collected will undergo a two-step filtration process before it is used in The Project utilities. The two-step filtration process will include:

1. **Primary Filtration-** The removal of any solid debris and hydrocarbon fuels (i.e., oils, gasoline, etc.) prior to entering the drain storage tank.
2. **Secondary Filtration-** The removal of any excess/remaining waste properties from the water present within the drain storage tank through reverse osmosis and a UV ray light filtration system.

Maintenance

Maintenance of the catchment system will include:

- Scheduled inspection and maintenances for any debris that may obstruct drainage pipes.
- Develop and implement a system checklist to be used during inspection.

Some measures to ensure overflow (outside of the system) does not occur will include:

- Installation of overflow ports on the roof of the proposed water catchment system.
- The creation of green spaces via landscaping, which result in permeable areas.

Historically, the site has no evidence of flooding issues reported or observed. However, the likelihood increases during the construction phase. The purpose drainage system is expected to be sufficient. Also, considering this system is for a proposed hotel development, it is expected that overflow is a low risk due to the high demand of water. In the event that unforeseen system limitations or capacity has been reveal or met, amendments will be made to improve limitations and expand capacity.

Appendix F: Traffic Management Plan

Traffic Management Plan

Development of The Project will result in an increase in commercial traffic (Heavy Equipment) to and from site. The objectives of this traffic management plan, is to minimize the impact on the public road system and establish protocols for vehicle movement within the site boundary. This will be achieved by identifying clear control parameters on site, such as flagman and signage, and establishing routes for personnel and vehicles. The Contractor is responsible for the execution of this plan.

To prevent roadway obstructions, trucks hauling materials will be covered and the Contractor will be responsible for inspecting all vehicles prior to their leaving the construction site. Any material that are highly likely to be dislodged during transit will be removed from trucks and other vehicles prior to leaving the site.

Traffic management on the site will include:

- Road blockage outside of peak traffic hours;
- Road blockage and rerouting of public roadways for private vehicles during the demolition of critical areas;
- Creation of a safety barrier during demolition and movement of heavy equipment on property;
- Designated haul routes for commercial vehicles;
- Maintenance of low speeds while driving;
- Only authorized personnel should operate heavy construction machinery;
- Traffic control/signage on site and on the adjacent roads of The Project site during times of heavy equipment movement to prevent accidents with private vehicles;
- Flagmen to direct traffic to maintain traffic flow through adjacent work zone and minimize traffic impacts;
- Banksman (spotters) to accompany all heavy machinery to minimize risk of pedestrian injury or damage to surrounding environment;
- Regular cleaning of roads;
- Securing the site (e.g., fencing) to prevent pedestrians from traversing the site and to protect adjacent vegetation from damage;
- Ensuring all workers wear high visibility vests so that drivers of commercial vehicles and heavy equipment can see them; and
- Training all workers in traffic hazards on site in an effort to avoid injury and loss of life.

Demolition operations will be restricted to daylight hours between 0700 hrs. and 1700 hrs. Road closure will not be required for the full duration of The Project, as most of the

construction activity will occur at the rear of the site. However, the demolition of the facade of the building will occur at night when there is less traffic to limit impacts. During this time the area will be blockaded, and traffic will be rerouted from West Bay Street.

Private vehicles traveling west on West Bay Street will be directed onto Chippingham Road. Traveling south on Chippingham Road, continue to approximately three hundred meters (300m) and turn right onto Colombus Avenue. Heading south on Columbus Avenue, travel approximately two hundred meters (200m) and turn right onto Saint Albans Drive. Follow Saint Albans Drive to the end of roadway before stopping at the T-junction and turning left onto West Bay Street (see Figure 1).

Private vehicles traveling east on West Bay Street will be diverted onto Saint Albans Drive. Traveling south on Saint Albans Drive, follow the curve and continue east on Saint Albans Drive. At approximately four hundred meters (400m) turn left onto Columbus Avenue and head north. At approximately two hundred meters (200m) turn left onto Chippingham Road and drive to the end of roadway before stopping at the T-junction and turning right onto West Bay Street (see Figure 2).

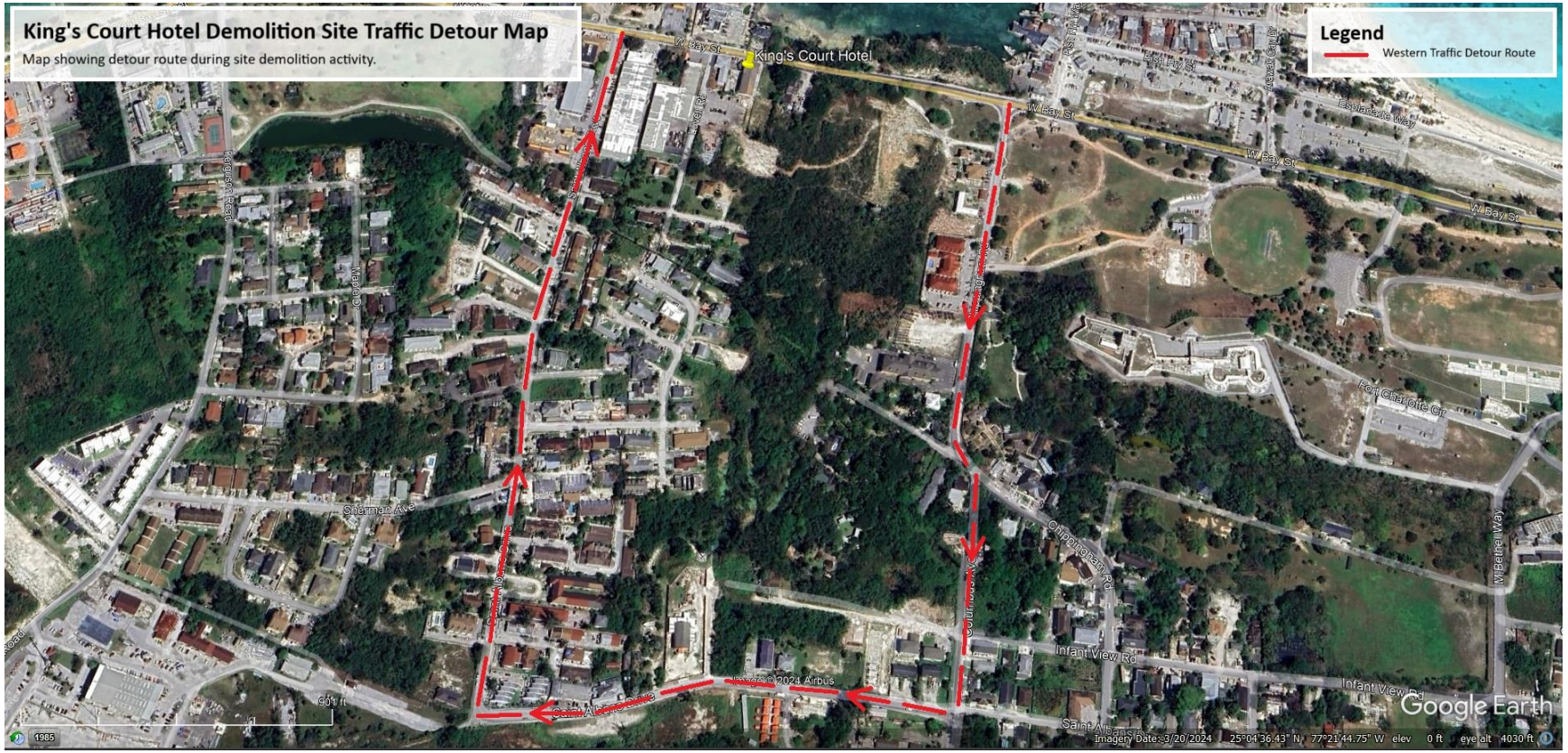

Figure 2: King's Court Hotel Demolition Site Detour Map for westbound traffic.

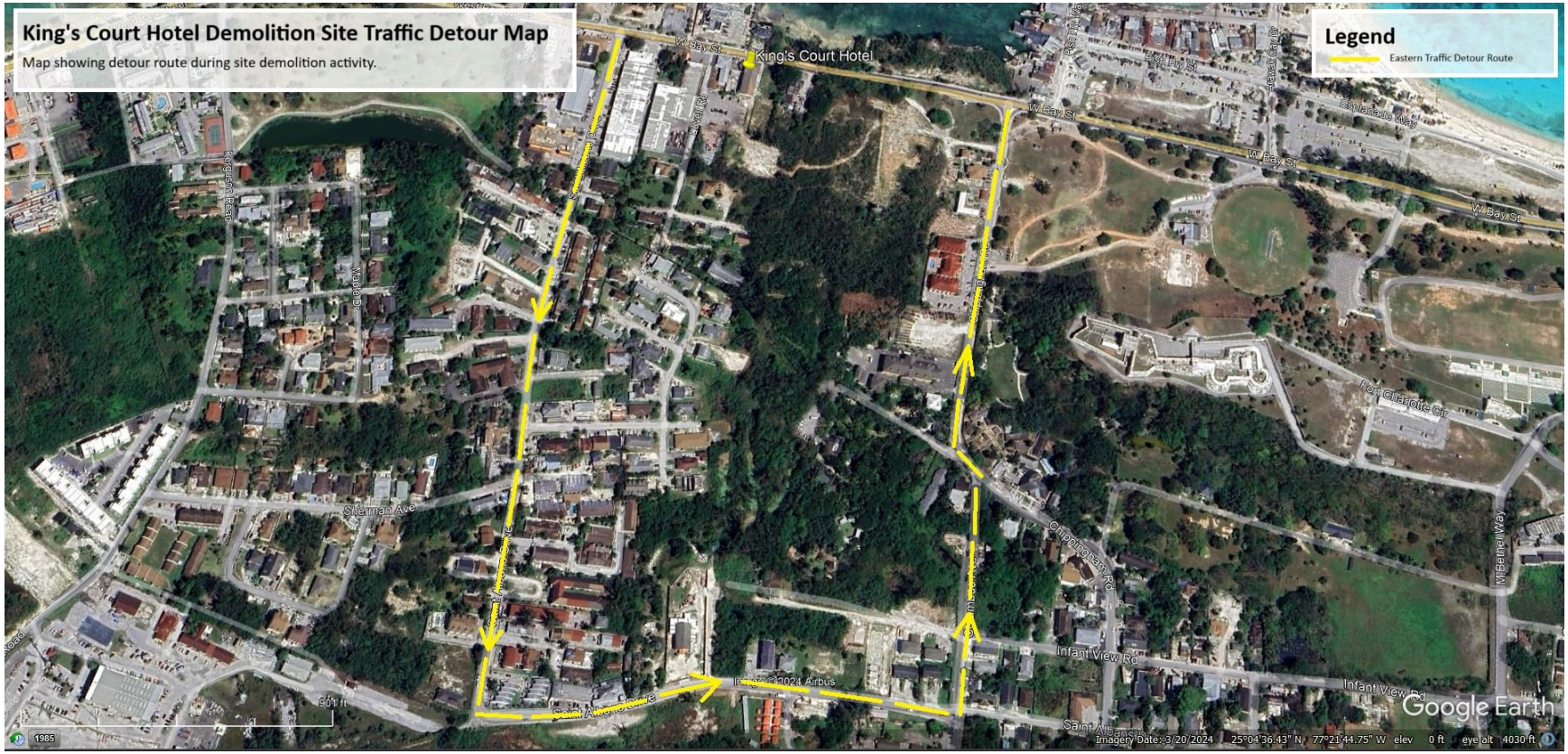

Figure 2: King's Court Hotel Demolition Site Detour Map for eastbound traffic.

Pedestrian-only routes and vehicle-only routes will be established on the site to provide safety for workers. These routes should be clearly designated by signage and strictly adhered to. Table 1 below outlines protocols for vehicle and pedestrian route.

Table 1: Protocols for Vehicle and Pedestrian Route.

Pedestrian Only Routes	**Vehicle Only Routes**
• Routes are located a reasonable distance away from areas of vehicle activity. • Routes are clearly separated from vehicle routes with barricades, or other suitable means, excluding flagging. • Routes are wi d e enough t o safely accommodate the volume of employees likely to use them during peak times. • Routes are free from obstructions and have safe and even footing. • Be clearly signed. • Provide safe crossings.	• Routes are wide enough to safely accommodate the number of vehicles likely to use them at peak times. • Take into consideration pedestrians • Routes allow easy access to delivery areas. • Routes are free of obstruction and are clearly and suitably signed. • Routes eliminate or reduce the need for excessive movement and reversing. • Temporary structures and surrounding vegetation are protected from vehicle impact. • There are measures to prevent vehicles depositing mud on the roadways. • Flagmen to direct traffic to maintain traffic flow through adjacent work zone. • Banksman/spotters should accompany all heavy machinery to minimize risk of pedestrian injury or damage to surrounding environment.

Once construction commences, the public will be advised of instances of inconvenience or disturbance, such as changes to traffic routes and times of excessive noise. Signage will also be utilized on and near the site to advise of traffic diversions and active construction areas. Signage will include information for the onsite contractor inclusive of a telephone number and email address for contacting them.

Appendix G: Asbestos and Lead Testing Report

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ENVIRONMENTAL CLEAN-UP SERVICES
ENVIRONMENTAL CONSULTANCY
ASBESTOS ABATEMENT
LEAD, MOLD REMEDIATION
FIRE RESTORATION

REPORT
OF AN INSPECTION, ASSESSMENT & TESTING
CARRIED OUT AT TWO BAHAMA GRILL BUILDINGS FOR LEAD
& THE POSSIBLE PRESENCE OF ASBESTOS CONTAINING MATERIAL (ACM)
WEST BAY STREET
NASSAU, THE BAHAMAS


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indoor air quality assessments, and indoor air quality testing)

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LEAD, MOLD REMEDIATION
FIRE RESTORATION

P.O. Box SS 19976, Nassau, Bahamas **(242) 557 0379**
Email Address: Enviromanagers242@gmail.com

Date: October 6, 2024

summary information

Prepared for:	Ms. Rickiera Gibson
Report Type:	Lead & Asbestos Evaluation
Facility(s) of Interest:	Baha Grill
Location:	Wast Bay Street

Authorized signature

Building materials containing more than 1% asbestos are classified as asbestos-containing material (ACM)

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FIRE RESTORATION

P.O. Box SS 19976
Nassau, Bahamas
Telephone: (242) 324 3854/(242) 5570379
Enviromanagers242@gmail.com

Ms. Rickiera Gibson
Bahama Grill
West Bay Street
Nassau, The Bahamas

October 6, 2024

Re: Inspection, Assessment, Testing Report for lead & the possible presence of Asbestos Containing Material (ACM), two Bahama Grill Buildings, Nassau, The Bahamas

Please find details regarding the above caption enclosed. Laboratory reports containing lead and asbestos testing results are also attached.

Thank you for choosing our company.

Sincerely

.....
(for) President

BAHAMA GRILL
WEST BAY STREET

1.0 INTRODUCTION

On September 21, 2024, two Bahama Grill Buildings (see below) were thoroughly inspected, assessed, and tested for various hazards, such as lead and the possible presence of asbestos-containing materials (ACMs) and suspected ACMs. The aim of the exercise was to ensure that both buildings were void of such hazards. The testing involved laboratory evaluation of building materials like paint, ceiling, etc.

Photograph of both Bahama Grill Buildings assessed

MAIN BUILDING

VACANT BUILDING

1.1 ASBESTOS

An **asbestos inspection** is the process of looking for ACM or suspected ACM in a building or other establishment. Materials containing more than 1% asbestos are classified as ACM. Material that has not been sampled and tested for asbestos content but is thought to be ACM is referred to as suspected ACM. Reexamining a structure or facility to find any new or suspected asbestos-related material (ACM) is another aspect of an asbestos inspection.

Asbestos is a highly fibrous mineral with long, thin, separable fibers. The thin fibers can be spun and woven together, and they possess valuable heat-resistant properties that make asbestos suitable for insulation and other such products. Indeed, for decades, asbestos was the material of choice for many manufacturing industries, and heat resistance, low electrical conductivity, flexibility, and high tensile strength were essential factors. Today, there are other alternatives.

1.1.1 WHEN IS ASBESTOS DANGEROUS

The most common way for asbestos fibers to enter the body is through breathing. ACM is not generally considered to be harmful unless it releases dust or fibers into the air, where they can be inhaled or ingested. Many of the fibers will become trapped in the mucous membranes of the nose and throat, where they can then be removed, but some may pass deep into the lungs or, if swallowed, into the digestive tract. Once they are trapped in the body, the fibers can cause health problems.

Understanding the term 'friable' is **key** to asbestos safety. This means that the asbestos can easily crumble by hand, releasing fibers into the air. Sprayed-on asbestos insulation is highly friable, but asbestos floor tile is not.

Asbestos-containing ceiling tiles, floor tiles, undamaged laboratory cabinet tops, shingles, fire doors, siding shingles, etc. **will not release asbestos fibers** unless they are disturbed or damaged. For example, if an asbestos ceiling tile is drilled or broken, it may release fibers into the air. If it is left alone and not disturbed, it will not.

Damage and deterioration will increase the friability of asbestos-containing materials. Water damage, continual vibration, aging, and physical impact, such as drilling, grinding, buffing, cutting, sawing, or striking, can break down the materials, making fiber release more likely.

1.2 LEAD

Millions of buildings still contain lead-based paint, usually hidden beneath layers of more recent paint. Lead-based paint is usually not a problem if the paint is in good condition. However, lead-based paint that is deteriorating—it may be peeling, chipping, chalking, cracking, damaged, or damp—is dangerous and requires quick care. It should be mentioned that lead-based paint is more common in structures constructed prior to 1978.

2.0 INSPECTION, ASSESSMENT & SAMPLING

2.1 INSPECTION, ASSESSMENT

The inspection and assessment involve a thorough evaluation of both buildings. This entailed detaching and cutting through some building materials.

2.2 SAMPLING

Collection of building samples and placement in properly labeled plastic bags for shipment to a United States Laboratory (see chain of custody and laboratory results attached).

Table 2.0: Sampling Summary & results

		LEAD		ACMS	
FACILITY SAMPLED	SAMPLE TYPE	PRESENT	ABSENT	PRESENT	ABSENT
Building1: Main	• Paint		✓		
	• Building Material				✓
Building 2: Vacant	• Paint		✓		
	• Building Material o Compound o Ceiling Material				✓

ACM – Asbestos Containing Material

3.0 INSPECTION, ASSESSMENT & TESTING RESULTS

INSPECTION RESULTS 1: MAIN BUILDING

Facility: Name: Bahama Grill **Location:** West Bay Street **Island:** New Providence

Area(s) Inspected: Ground & First Floor Levels

Inspection for Asbestos:

Thermal System Insulation (TSI): Pipe Insulation, Ductwork Insulation and Ceiling Insulation

Non-Thermal System Insulation (TSI) or Non-Surfacing Material (like fireproofing): Ceiling Tiles and Floor Tiles

Inspection for Lead:

Paint (peeling, chipping, chalking, cracking, damaged, or damp)

Facility Description: ☑ Commercial ☐ Public ☐ Industrial ☐ Residential

Building Description: Two-Level Structure

Date of Inspection: September 21, 2024

Type of inspection: ☐ Renovation ☑ Demolition

Is Asbestos Containing Material Present? ☐ YES ☑ NO

Is Suspected Asbestos Containing Material Present? ☐ YES ☑ NO

Laboratory Results Present? YES ☑ NO ☐

INSPECTION RESULTS 2: VACANT BUILDING

Facility: Name: Bahama Grill **Location:** West Bay Street **Island:** New Providence

Area(s) Inspected: Ground & First Floor Levels

Inspection for Asbestos:

Thermal System Insulation (TSI): Pipe Insulation, Ductwork Insulation and Ceiling Insulation

Non-Thermal System Insulation (TSI) or Non-Surfacing Material (like fireproofing): Ceiling Tiles and Floor Tiles

Inspection for Lead:

Paint (peeling, chipping, chalking, cracking, damaged, or damp)

Facility Description: ☑ Commercial ☐ Public ☐ Industrial ☐ Residential

Building Description: Two-Level Structure

Date of Inspection: September 21, 2024

Type of inspection: ☐ Renovation ☑ Demolition

Is Asbestos Containing Material Present? ☐ YES ☑ NO

Is Suspected Asbestos Containing Material Present? ☐ YES ☑ NO

Laboratory Results Present? YES ☑ NO ☐

4.0 COMMENTS

The ultimate aim of this inspection, assessment and laboratory testing exercise carried out at two Bahama Grill Buildings was to ensure the absence of the following hazards:

- ACMs and suspected ACMs in building materials; and
- The presence of lead in building paint.

Based on the results obtained, it is clear that the aforementioned hazards are absent from the Buildings.