ENVIRONMENTAL MANAGEMENT PLAN

MONTAGE CAY
ABACO

CONDUCTED FOR

Sterling Global Financial Limited
81 East Bay Street
PO Box N1812,
Nassau, Bahamas

FOR SUBMITTAL TO

THE MINISTRY OF THE ENVIRONMENT AND HOUSING
DEPARTMENT OF ENVIRONMENTAL PLANNING & PROTECTION
Ground Floor, Charlotte House
P.O. Box N-7132
Nassau, The Bahamas

PREPARED BY

P.O. Box SS-6533, Nassau, Bahamas
info@islandsbydesign.com
www.islandsbydesign.com

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1 INTRODUCTION

Matt Lowe's Cay is a fifty-three (53) acre island that has been partially developed over 2 decades. The Cay lies in the Sea of Abaco and is approximately one hundred and ten miles north - north east of Nassau and approximately four miles from the centre of Marsh Harbour.

The Developer, Sterling Montage Cay Limited (SMCL) aims to develop the island by maintaining the already existing marina. Additionally, the island has been slated for selling of lots for single family homes, restaurant facilities, recreational facilities, spa, and fitness centre, a 36-room boutique hotel, back of house facilities, a helipad and seaplane facilities and 6 near water structures.

1.1 PURPOSE & SCOPE

An Environmental Management Plan, (EMP), can be defined as "an environmental management tool used to ensure that undue or reasonably avoidable adverse impacts of the construction, operation and decommissioning of a project are prevented; and that the positive benefits of the projects are enhanced". EMPs are therefore important tools for ensuring that the management actions arising from EIA processes are clearly defined and implemented through all phases of the project life-cycle.

The key features of the EMP are that it:

- Assumes a broad understanding of the term "environment", that includes the biophysical, social and economic components;
- Includes the enhancement of positive impacts (benefits) as well as the mitigation of potential negative impacts; and
- Should not be viewed as a prescriptive and inflexible document.

The contents and commitments that comprise this EMP are the responsibility of SMCL together with their consultants, sub-consultants and contractors.

This EMP has been prepared according to the terms of reference submitted to the Department of Environmental Planning & Protection (DEPP) on 28th July, 2021. This EMP is a project specific document developed to ensure that appropriate environmental management measures are followed during the construction of the Montage Cay Project to avoid, eliminating or minimize environmental impacts.

More specifically, the purpose of the document is to ensure that:

1. Environmental Impacts and Risks identified in the EIA are effectively managed.
2. The project complies with applicable legislative requirements.
3. Guidelines are outlined for the project management team regarding protection for the natural environment.

To achieve the outlined purpose, the following subjects are detailed:

- Environmental Management Framework

- Summary of significant impacts
- Specific mitigation measures / Construction Management Plans
- Training regarding environmental compliance

The EMP is a comprehensive living document and will be updated throughout the construction phase of the project in the event of unforeseen circumstances or change in project scope. It is to be used in conjunction with the project's Environmental Impact Assessment, (EIA), but is presented in a standalone format. Each management plan in this document may also be used as an individual document.

1.2 Project Details

1.2.1 Project components

Covered area and paved surfaces will comprise the following;

- 26 Estate Villas @ 15,000 S.F./Villa = 390,000 S.F. (9.0 Acres)
- 21 Branded Villas @ 8,200 S.F./Unit = 172,200 S.F. (3.9 Acres)
- Hotel Common Area Bldgs./Hardscape/Marina Sidewalks/Tennis/Etc. = 219,391 (5 Acres)

For a total of 781,591 S.F. (17.94 acres) or (33% of 53-acre island). Areas of Cleared Vegetation will total 1,284,578 S.F. (31 acres) of vegetation removal or 60% of 53-acre total.

1.2.2 Phasing

The project will not adopt a phasing sequence. The following construction sequence will prevail;

- Establish a man camp for up to 20 persons on the Cay
- Complete all civil infrastructure
- Complete and energize installation of Waste Water Treatment Plant (WWTP)
- Commence vertical construction on 2 Estate Homes and 2 Villas
- Commence vertical construction on the hotel components
- Continue vertical construction of villas as market forces dictate

2 LEGISLATION

The Contractor shall be responsible for complying with all regulatory standards both nationally and internationally to protect the environment.

The following sections provide a guide to relevant law of The Commonwealth of The Bahamas, National Policies, and International Conventions to which The Bahamas is a signatory.

2.1 INTERNATIONAL LAWS, STANDARDS & CONVENTIONS

Table 2-1: List of International Laws, Standard & Conventions relevant to Montage Cay Project

International Convention/Organization	Subject	Summary
Cartagena Convention Ratified: June 24, 2010	An agreement for the protection and development of the marine environment in the wider-Caribbean region	The Convention provides a legal framework for cooperation in the wider Caribbean region. Three technical agreements support the Convention which include: Protocol for Co-Operation in Combating Oil Spills Protocol for Specially Protected Areas and Wildlife (SPAW) Protocol Concerning Pollution from Land-based Sources and Activities (LBS) Contracting parties must adopt measures to prevent, reduce, and control pollution from: ships, dumping, sea-bed activities, airborne pollution, and pollution from land-based sources and activities.
Convention on Biological Diversity Signed: June 12, 1992	To preserve species diversity	The Bahamas is a signatory to the Convention on Biological Diversity which came into force December 1993. It has three main goals: a) The conservation of biological diversity b) The sustainable use of components of biological diversity c) The fair and equitable sharing of the benefits arising out of the utilization of genetic resources

2.2 National Legislation

Table 2-2: List of National Legislation relevant to Montage Cay Project

Environmental Law, Regulation, Policy	Subject	Summary
Antiquities, Monuments, and Museum Corporation Act 1998, Chapter 51	To protect antiquities	An Act to provide for the preservation, conservation, restoration, documentation, study and presentation of sites and objects of historical, anthropological, archaeological and paleontological interest, to establish a National Museum, and for matters ancillary thereto or connected therewith.
Bahamas National Trust Act, 1959 Bahamas National Trust Amendment, 2013	Designation and management responsibility for National Parks	This Act and Amendment founded the Bahamas National Trust and grant it authority for the provision and oversight of National Parks in The Bahamas.
Bahamas Protected Areas Fund Act 2014	To establish the Bahamas Protected Areas Fund	The Bahamas Protected Area Fund is a regulated organization for oversight of protected areas to ensure sustainable financing and management activities under the Caribbean Challenge Initiative and Caribbean Biodiversity Fund.
Coast Protection Act, 1968 Chapter 204	To protect the coast	An Act to make provision for the protection of the coast against erosion and encroachment by the sea and for the purposes connected therewith. Coast protection work means any work or construction alteration, improvement, repair, maintenance, demolition or removal for the purpose of the protection of any land; and includes the sowing or planting of vegetation for said purpose.
Conservation and Protection of the Physical Landscape of The Bahamas, 1997 Chapter 260	Excavation, Landfill, Quarrying, Mining, Protected Trees Listing	This Act makes provisions for the regulation of activities including excavation, landfill, quarrying, mining, and harvesting of protected trees in The Bahamas for the purpose

Environmental Law, Regulation, Policy	Subject	Summary
		of conservation of maintenance of the environment. The Regulations include a list of protected tree species in The Bahamas.
Department of Environment Planning Act 2019	To provide regulations to guide development and protect the environment.	This bill establishes an integrated environmental management system and provides a legal framework for the protection and conservation of the environment. It establishes the Department of Environmental Planning and Protection, to provide for the prevention or control of pollution, the regulation of activities, and the administration, conservation and sustainable use of the environment and for connected purpose.
Environmental Health Services (Collection and Disposal of Wastes) Regulations 2004	To administer and outline waste collection and management facilities	Environmental Health Services (Collection and Disposal of Wastes) Regulations 2004 establish the collection and control of waste including waste facilities and other matters relating to wastes.
Environmental Health Services (Fees and Services) Regulations 2000	To establish fees and services performed by the Department of Environmental Health Services	The Fees and Services regulations outline services and associated fee rates performed by the Department of Environmental Health Services. The Department may provide testing for air quality, water quality, and radioactive materials.
Environmental Health Services Act 1987	To promote and protect the public health and to provide for the conservation and maintenance of the environment	An Act to promote the conservation and maintenance of the environment in the interest of health for proper sanitation in matters of food and drinks, and generally for the provision and control of services, activities, and other matters connected therewith or incidental thereto.

Environmental Law, Regulation, Policy	Subject	Summary
Forestry Act 210	To protect natural resources and promote sustainable management of forest and protect	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.
Health and Safety at Work Act 2002	To protect human health and safety at work	The purpose of the Act is to: - secure the health, safety and welfare of persons at work- protect persons other than persons at work against risks to health or safety arising out of or in connection with the activities of persons at work- control the storage and use of explosive or highly flammable or otherwise dangerous substances, and generally preventing the unlawful acquisition, possession and use of such substances.
Planning and Subdivision Act, 2010 Planning and Subdivision Regulations (Application Requirements), 2011	To regulate the built environment	This Act regulates the development of the built environment though physical planning protocols across the archipelago of The Bahamas. The Act stipulates the process for subdivision approval subject to specific conditions with respect to the features of the proposed development or project including the preparation of an Environmental Impact Assessment/Statement

Environmental Law, Regulation, Policy	Subject	Summary
Plants Protection Act 1916 (Amended 1987)	To protect plant health.	Relates to plant disease and controls importation of plants to prevent outbreaks of exotic disease and establishment of unwanted species.
Port Authorities Act 1962	To provide regulation for the management and control of navigational areas	An Act to provide for the constitution and appointment of port authorities for New Providence and the Out Islands whereby the various ports and harbors of The Bahamas and the pilots and pilotage thereof and therein may be better regulated and controlled.
Public Works Act 1963	To provide for the physical development of The Bahamas	An Act to provide for the construction, management and development of public works, buildings, and road.
Water and Sewerage Act 1976	To establish the Water and Sewerage Corporation and to control water resources	An Act to establish a Water and Sewerage Corporation for the grant and control of water rights, the protection of water resources, regulating the extraction, use and supply of water, the disposal of sewage and for connected purposes.
Wild Animals Protection Act 1968	To protect wild animals of The Bahamas	The Act provides a listing of protected animal species in The Bahamas.
Wild Birds Protection Act 1987 Wild Bird Protection Act (Reserves)	To protect wild birds of The Bahamas	The Act protects the wild birds of The Bahamas and makes provision for the dedication of time periods for the hunting of specific species.

2.3 National Policies

Table 2-3: List of National Policies relevant to Montage Cay Project

Relevant National Policies	Subject	Summary
Bahamas National Maritime Policy, 2015 (Draft)	The National Maritime Policy provides a guidance to expand the maritime sector through safe and sustainable practices.	The Objectives of the Bahamas National Maritime Policy are: to expand the maritime sector for future economic development to provide employment opportunities for Bahamians both nationally and internationally to facilitate the training of mariners consistent with international norms to establish programs and protocols that enhance the safety of mariners and vessels to upgrade port infrastructure and port services throughout the country
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	A plan to maintain biodiversity through sustainable development	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.

Relevant National Policies	Subject	Summary
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.

3 ENVIRONMENTAL MANAGEMENT SYSTEM

3.1 ENVIRONMENTAL POLICY STATEMENT

Sterling Montage Cay Limited (SMCL) has adopted the following Environmental Policy Statement of its commitment to minimize environmental and social effects associated with the construction and operation of the Montage Cay project.

SMCL will operate in compliance with all relevant national environmental legislation and will strive to use environmental best practices in all we do to prevent harm to the environment through proactive management.

To further this policy, we are committed to:

- identify and assess the environmental aspects and impacts of activities to prevent avoidable environmental damage;
- involve employees in an environmental program and provide necessary training to enable them to perform their duties in a manner that is environmentally responsible;
- reduce the amount of waste generated;
- communicate our environmental commitment to visitors, and encourage them to support it; and
- carry out all reasonable practical measures to continuously improve environmental performance.

All Contractors and subcontractors will adopt and adhere to this environmental policy while working on behalf on the Montage Cay Project.

3.2 ENVIRONMENTAL MANAGEMENT FRAMEWORK

The overall goal of the Environmental Management System for Montage Cay Project is to ensure that the project remains in compliance with the Government's Environmental Regulations and Policies and that works are conducted using industry best practices to avoid, reduce or mitigate environmental impacts associated with the works.

The Environmental Management Framework outlined herein identifies key elements for developing, implementing, achieving, reviewing and maintain the environmental policy; including organizational structure, planning activities, responsibilities, practices, procedures, processes and resources.

Identification and adoption of industry best practices drive performance improvements in terms of cost, schedule, and productivity will be adopted into all construction elements inclusive of the overwater structures.

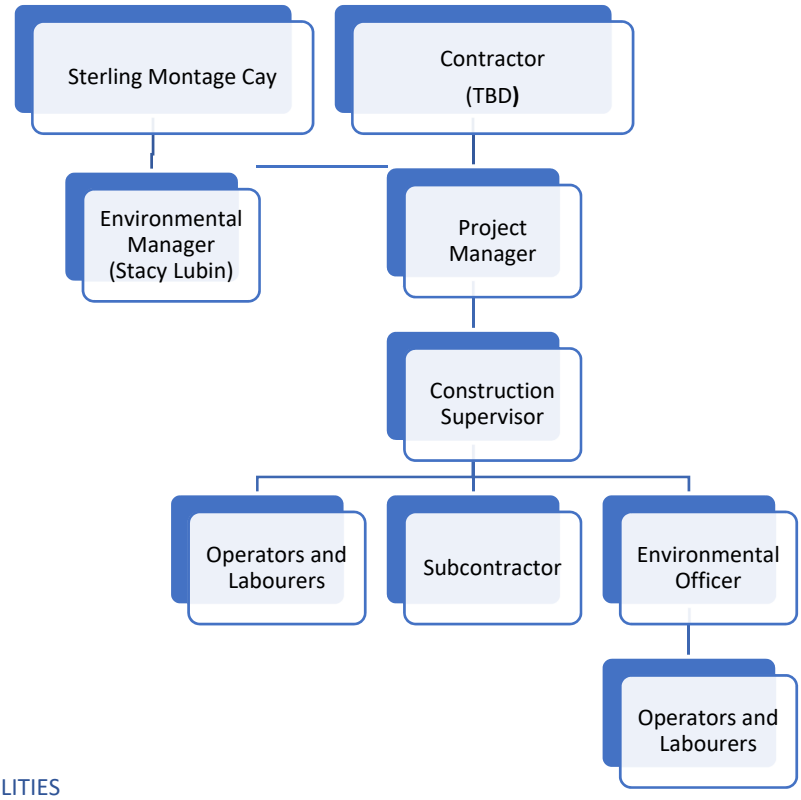
A framework will then be established for transforming best practices into structured processes implementable into workflow management systems.

3.3 Organizational Structure

3.3.1 Organizational Chart

The following is the organization chart relative to Environmental Management of the project.

Chart 1: Project Organizational Structure



3.3.2 Roles & Responsibilities

Implementation of this EMP will be the responsibility of the Environmental Management Team (EMT) which will be comprised of representatives from Sterling Montage Cay and the Contractor's Team.

The object of the EMT is to familiarize themselves with the project specific environmental requirements, educate the various stakeholders within their area of influence, build consensus among the stakeholders, implement the environmental requirements and BMPs, and communicate the results. Tasks to accomplish this objective include:

1. Kick off meeting;
2. Preliminary reviews of the EMP;
3. Monitor adherence to the EMP;
4. Correct deficiencies; and
5. Communicate compliance.

Responsibilities of each individual identified in the organizational chart is detailed in the section below.

3.3.2.1 Sterling Montage Cay Team

Environmental Manager

Stacy Lubin has been appointed as the Environmental Manager (EM) for the project (CV attached in Appendix 1). The EM responsibilities are as follows:

Inspections:

- Conduct formal monthly site inspections with contractor's representative using site inspection sheet (see Appendix 2 for site inspection sheet template).
- Conduct official site inspections with DEPP personnel.

Reporting:

- The EM is the point of contact for the DEPP and is responsible for submitting reports to the agency.
- The onsite environmental officer or their assign will produce and submit bi-weekly (two times per month) environmental reports to the EM for onward submission to DEPP.
- Issue Nonconformance report on matters arising from site inspections and daily oversight.
- Update EMP based on new information or changes in project scope.

Training:

- Conduct initial environmental site induction prior to the start of construction.
- Perform toolbox talks on matters of environmental concern.

Stakeholder Engagement:

- Maintain Stakeholder engagement log.
- Perform stakeholder engagement and respond to issues of environmental and social concern.

3.3.2.2 Contractor's Team

Project Manager

The Contractor will appoint a Project Manager (PM) to oversee project activities. The PM will be responsibilities for the following tasks related to implementation of the EMP:

- Along with the Environmental Officer (EO), the PM will ensure that environmental stipulations outlined in method statements are adhered to in construction activities.
- Ensure that the EM and EO is immediately informed of an incident of environmental concern that occurs on the site.

- Advise the EO of all new employees on the site for environmental site induction.
- Facilitate toolbox talk on environmental matters to be administered by the EM or EO.
- Coordinate hurricane preparedness and post storm activities.
- Conduct Health & Safety Site induction or designate Safety Officer for this task.

Environmental Officer

An onsite Environmental Officer (EO) will be appointed for the project. A CV will be provided to DEPP for the potential candidate prior to appointment. The EO responsibilities are as follows:

Inspections:

- Day to day oversight of construction activities to ensure that works are conducted using best management practices and the project maintains environmental compliance with the EMP and the owner's environmental policy.
- Conduct daily site inspections using site inspection sheets.
- Liaise with all parties and follow up on NCR issued to seek resolution and close out.

Reporting:

- Witness daily turbidity monitoring.
- Conduct daily inspections of turbidity curtains.
- Log incidents into the BESTPROTECT242 APP and contact DEPP on incidents occurring on the site.

Training:

- Conduct site inductions for visitors and new employees.

Construction Supervisor:

The Construction Supervisor (CS) will report to the PM and EO. The CS is responsible for ensuring that subcontractors, operators and labourers adhere to environmental safeguards outlined in the works methodology.

Subcontractors and Employees:

It is the responsibility of the subcontractors and employees working on the project to report any incidents of non-conformance or potential non-conformance to the CS.

3.4 Environmental Management Tools

The following Environmental Management Tools will be used as a part of the overall environmental management system.

3.4.1 Site Inspections

The most essential element of the environmental management system is the site inspections. This is a key tool in identifying, addressing and avoiding issues of environmental concern. The EO will conduct daily site inspections. The EM will accompany the contractor once monthly for an official site inspection using a site inspection sheet (See Appendix 2 for Site Inspection Sheet Template). Site inspections will include the following observations:

- **Site Safety and Health:** Personal Protective Equipment (PPE) and Waste Management
- **Water Management:** Groundwater Management, Protection of waterbodies, Sediment Control
- **Vegetation:** Habitat preservation and protected species
- **Materials:** Source of construction material and storage of material (fuel and fill stockpiles)
- **Air Quality:** Construction equipment condition and maintenance, dust control
- **Noise Quality:** Construction equipment condition and operating hours

3.4.2 Report and Communication

Reports will be used as a means of documenting and providing information of environmental monitoring of the project. The following reports will be used for the project:

Maintenance of EMP

The EMP is the major guiding tool for environmental management during construction and operation. As the EMP is a dynamic document, it will be necessary to provide relevant information to update it for the life of the construction and during operations to reflect changes and new circumstances that might arise. The EM will be responsible for updating the EMP document and submitting revisions to the DEPP.

Environmental Reports

Environmental reports outlining activity of environmental concern, monitoring and compliance during the period will be produced by the EM. Reports will be submitted to the DEPP on a bi-weekly basis. A template of the Environmental report is attached in Appendix 2.

Incident Reports

The Contractor shall provide the EM with detailed reports outlining any incident with an environmental concern. Incident reports should be submitted to the EM within 48 hours of the event. The EO shall communicate via telephone, the occurrence of an incident to DEPP immediately upon being briefed of the details and then log the incident into the BESTPROTECT242 APP. The EM will forward an incident report to DEEP immediately upon receipt and include the same in the biweekly report. An incident report template is provided in Appendix 2.

Nonconformance Reports (NCR)

NCRs will be used as an official notification of an environmental concern. It outlines the issue of concern and requires the Contractor to provide corrective actions to be taken. When an NCR is issued, the EO and

EM will ensure that corrective actions described in NCR are carried out. An NCR template is provided in Appendix 2.

3.4.3 TRAINING

Site Induction

Site inductions will be used as a means of environmental management. A site induction will be conducted prior to the commencement of construction and repeated periodically to accommodate new persons working on the site. All team members and Sub-Contractors will be required to sign that they have received the contents of this EMP by way of the site induction; and that they understood and will comply with it. A register of all persons attending site inductions will be maintained as a part of the project's record keeping. Site inductions will be conducted by the EM and EO.

The environmental site induction will include the following topics:

Section 1: Introduction

- Outline the purpose and objectives of the induction
- Present an Overview of the Project Components
- Detail the Project's Organizational Structure relative to Environmental Management

Section 2: Site Description

- Describe the terrestrial vegetation types present on the site and include photographs.
- Use of photographs to describe wildlife likely to be encountered on the site, including Avian & Herpetology.

Section 3: Environmental Management Plans

- Terrestrial Habitat Conservation including invasive species management and protection of retained vegetation.
- Protection of the marine environment including sediment control, impacts of marine debris on marine life with emphasis on The Bahamas's ban of single use plastics.
- Groundwater Management including Fuel Spill Prevention and Control Plan & Procedure and proper use of spill kits.
- Solid Waste Management including storage and disposal of solid and hazardous waste.
- Noise & Light Control including equipment maintenance and PPE.
- Air Quality Control including dust control and equipment maintenance.
- Emergency Response including Spill response & Hurricane Preparedness Plan Procedure.

Section 4: General code of conduct

- Outline the Contractor's responsibilities in implementation of the EMP

- Outline the Employees' responsibilities in implementation of the EMP

Section 5: Question and Answer

- Provide the opportunity for individuals to ask questions for clarification if needed.

Toolbox Talks

Toolbox talks will be used as a preventative measure before the start of each new activity on site. In addition, it will also be used as a corrective action in response to NCR or observations of concern noted by the EO. Toolbox talks will be conducted by the PM, EO or EM as appropriate based on the subject.

Signage

Signage will be implemented as a reinforcement tool throughout site in high impact locations such as staging area.

4 SUMMARY OF IMPACTS

The following is a summary of the potential impacts from the project.

Table 4-1: Summary of Impact associated with construction activities on Montage Cay Project

Ref	Significant Aspect and Impact	Activity	Potential Impact
4.1a	**Terrestrial Habitat Management**	Land clearing	Habitat loss (direct)
4.1b			Habitat loss (indirect from dust build-up on plants)
4.1c		Fuel storage and handling	Fires
4.2a	**Invasive Species Management**	Invasive Species Removal	Spread of invasive plant species from existing individuals on the island
4.3a	**Landscaping**	Importation of plants	Introduction of new invasive plant species
4.3b			Introduction of invasive animal species
4.3c			Introduction of plant pest and disease
4.3d		Equipment use for installation of plants	Habitat loss from over clearing
4.3e		Fuel storage and handling	Fires
4.4a	**Marine Environment Management**	Fuel storage and handling	Contamination from hydrocarbon spills
4.4b		Land clearing	Sedimentation runoff and Turbidity
4.4c		*Pile driving for dock	Turbidity
4.4d		Fuel Storage and handling	Fuel spill runoff from upland
4.4e		Hurricanes	Fuel spills from boats
4.4f		Sanitary waste storage	Contamination from accidental and intentional spills
4.4g		Green Waste and Inorganic solid waste storage	Marine debris
4.4h		Recreational fishing	Fisheries violations
4.4i		Employees recreational Fishing	Intentional harm to marine life such as sharks
4.5a	**Groundwater Management**	Fuel storage and handling	Groundwater contamination from fuel spill

Ref	Significant Aspect and Impact	Activity	Potential Impact
4.5b		Sanitary Waste Storage and handling	Groundwater contamination from sanitary waste Spill
4.6a	**Waste Management**	Minicipal waste	Marine debris (Inorganics)
4.6b			Rodent and vector attraction/breeding (organic waste)
4.6c		Hazardous waste	Groundwater contamination from spills
4.6d			Fires
4.6e			Employees accident and health risks from spills
4.6f		Hazardous waste - concrete storage and handling	Groundwater contamination form spills
4.6g		Hazardous waste - concrete works	Contamination of Marine environment from runoff
4.6h		Sanitary waste	Groundwater contamination from spills
4.6i			Contamination of Marine environment from accidental and intentional spills
4.6j			Employees health risks from exposure to spills
4.6k		Green Waste	Invasive species spread
4.7a	**Noise, Light and Air Quality Control**	General Equipment use noise	Employee health risks
4.7b		General Equipment use	Air pollution from vehicular emissions
4.7c		Land Clearing	Air pollution from dust
4.8a	**Emergency Response**	Fuel Spill – Fuel handling and storage	Ground water contamination
4.8b			Pollution of coastal waters
4.8c			Fires
4.8d			Employee accident from spill and sickness from exposure to fumes
4.8e		Hurricanes - Fuel spill	Contamination of ground water
4.8f			Pollution of wetlands and coastal waters
4.8g		Hurricanes - high waves and tides	Fuel spills from boats damaged during storm
4.8h		Hurricane - Floods	Fuel spills upland that reaches marine environment
4.8i		Hurricane – Upland Fuel spill	Fires that result in habitat destruction and loss of wildlife
4.8j		Hurricane – Solid waste	Marine debris
4.8k			Injury and or loss of life of personnel from projectiles
4.8l		General	Medical emergency

BIODIVERSITY MANAGEMENT PLAN

5 ENVIRONMENTAL MANAGEMENT PLANS

5.1 BIODIVERSITY MANAGEMENT PLAN

5.11 INTRODUCTION

There are four (4) major categories of terrestrial ecosystems at Montage Cay: beach strand communities (*Uniola paniculata Herbland*); Rocky shore communities (*Rhachicallis americana Shrubland*); dry broad-leaved evergreen formations; and human-altered. A total of one hundred and thirty-five (135) species were recorded on the site including three protected species were identified on the site: Lignum Vitae (*Guaiacum sanctum*), Mahogany (*Swietenia mahogani*) and Beefwood (*Guapira discolor*).

A total of 41 avian species were recorded on the site during October 14th and 15th 2020. Habitat preservation plays a significant role in wildlife management and considerations should be made for protection of terrestrial habit during the land clearing process.

5.1.2 PURPOSE

The purpose of this plan is to ensure that impacts on the terrestrial habitat and the biodiversity that they support are minimised. Specifically, this plan aims to:

1. Preserve habitat – The primary goal is to maintain as much of the natural vegetation in its current state.
2. Minimize Impact – Identify measures to ensure that works are conducted in a manner that minimizes direct and indirect impacts.
3. Mitigate – Identify actions to be taken to compensate for habitat loss impact.

5.1.3 APPLICABLE LEGISLATION

The following national legislations relevant to the physical and natural environment apply to activities with the potential for impact to the terrestrial environment.

- Environmental Health Services Act (Amended 2004)
- Wild Birds Protection Act (Amended 1994)
- Conservation and Protection of the Physical Landscape of The Bahamas Act (Amended 2000)
- The Bahamas National Trust Act (Amended 2010)
- Planning and Subdivision Act
- The Forestry Act (2010)
- Environmental Planning and Protection Act (2019)

5.1.4 RELATED PLANS

This plan is to be used in conjunction with the Montage Cay EMP in its entirety and has overlapping elements with the following specific plans:

- Invasive Species Removal & Control Plan (detailed in section 5.2)
- Landscape Management Plan (detailed section 5.3)
- Dust Control Plan (detailed in section 5.7)
- Fuel Spill Prevention and Control Plan (detailed in section 5.8)

5.1.5 Priority Construction Activities & Potential Impacts

Potential Impacts during construction include:

- loss of habit from land clearing,
- dust associated with land clearing and
- the potential for fires from fuel storage and handling

5.1.6 Management Strategy

Protocols for identifying and protecting native vegetation during the construction phase will be implemented by the EM and or the EOs. Measures will include installation of construction fencing around individual, clusters or sections of native species. Care should also be taken to the greatest extent practicable to preserve natural grade elevations around any native trees or shrubs in the event fill or excavation be required.

Mitigation Projects to compensate for loss of habitat through land clearing includes invasive species removal and a landscape plan that incorporates native species, consisting of a broad variety of species that support wildlife. Protected Species will be included in the landscape palette.

Dust control measures should also be implemented during the land clearing process to minimize the potential for indirect habitat loss in retained vegetation due to interference with photosynthesis from dust build up on leaves. A detailed dust control plan is included in section 5.7.

Spills from fuel handling and storage can introduce accelerant agents to the environment which can cause or worsen damage by fire leading to widespread destruction of habitat. A detailed Fuel Spill Prevention and Control plan is provided in section 5.8 that identifies management strategies to address this concern.

INVASIVE SPECIES REMOVAL & CONTROL PLAN

5.2 Invasive Species Removal & Control Plan

5.2.1 Introduction

The Bahamas, like many countries globally, is faced with the ecological challenge of invasive alien species which threatens native biodiversity and habitats. Thirteen (13) invasive species were recorded during the investigation (See table 5.2-1 below).

Table 5.2-1: Invasive Species observed on Montage Cay

Species	Occurrence and abundance	Recommendations*
Asparagus densifloris Asparagus fern	Occasional species in human altered area near location of old structure.	None listed
Casuarina equisetifolia, Australian Pine	A few seedlings were observed in vegetation types along the coastline	Control
Delonix spp., Poinciana	One (1) individual was observed in the human altered vegetation type.	Control
Ipomoea purpurea, Morning Glory	This species was observed in abundance in Human altered areas and within the dry broadleaf evergreen formation along the edges of roads and trails.	Control
Jasminum fluminense, Jasmine vine	This species was observed in abundance in Human altered areas	Control
Leucaena leucocephala, Jumbey	This species was observed in abundance at Human altered areas and within the dry broadleaf evergreen formation along the edges of roads and trails.	Control
Rhoeo spathacea, Oyster Plant	This plant was observed as an occasional species in human altered areas and within the dry broadleaf evergreen formation near human altered areas.	None listed
Sansevieria hyacinthoides, Bowstring hemp	This plant was observed as an occasional species in human altered areas and within the edges of dry broadleaf evergreen formation near human altered areas.	None listed
Scaevola taccada, Hawaiian Seagrape	This plant was observed as a common species in vegetation types along the coastline.	Eradication

Species	Occurrence and abundance	Recommendations*
Schinus terebinthifolius, Brazilian Pepper	This species was observed in the human altered areas of the site.	Eradication
Tabebuia impetiginosa, Pink poui	A few individuals were observed as intentionally planted species within landscaped human altered areas. Seedlings of this species was also observed in abundance within the dry broadleaf evergreen formation along the edges of roads and trails near landscape human altered areas.	None listed
Terminalia catappa, Almond	This species was observed in the human altered areas.	Control
Wedelia trilobata, Carpet daisy	A patch of this species was observed on one of the beach strand and appeared to be intentionally planted and not naturally occurring or established by natural dispersal means.	Control

* National Invasive Species Strategy for The Bahamas

There is an active Australian Pine removal program in place that has successfully eradicated the mature and juvenile individuals of this species from the island. There are occasional seedlings that emerged which are controlled by maintenance removal exercises.

5.2.2 Purpose

The purpose of this plan is to ensure that potential impacts associated with invasive species removal are addressed. Specifically, this plan aims to:

- provide guidance on the removal of existing invasive plant species on site;
- decrease the likelihood of invasive plant species re-emerging after removal and
- ensure that new and or additional alien invasive species are not introduced through the project

5.2.3 Applicable Legislation

The following national legislations relevant to the physical and natural environment apply to activities with the potential to impact invasive species management.

- Environmental Health Services Act (Amended 2004)
- Wild Birds Protection Act (Amended 1994)
- Conservation and Protection of the Physical Landscape of The Bahamas Act (Amended 2000)
- The Bahamas National Trust Act (Amended 2010)

- The Forestry Act (2010)
- Department of Environmental Planning and Protection Act (2019)

5.2.4 Related Plans

This plan is to be used in conjunction with the Montage Cay EMP in its entirety and has overlapping elements with the following specific plans:

- Biodiversity Management Plan (detailed in section 5.1)
- Landscape Management Plan (detailed in section 5.3)
- Dust Control Plan (detailed in section 5.7)
- Fuel Spill Prevention and Control Plan (detailed in section 5.8)

5.2.5 Definitions

The following definitions relating to invasive species management are listed the Bahamas National Invasive Species Strategy (2013) as:

Alien species *– non-native, non-indigenous, foreign, exotic species occurring outside of their natural range and dispersal potential, and includes any part, such as seeds and larvae, that might survive and subsequently reproduce.*

Biodiversity *– The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems. Short for biological diversity.*

Control *– Measures to eliminate or reduce the effects of invasive species, including eradicating infestations, reducing populations of invasive species, preventing their spread and mitigating their impact on the economy.*

Intentional introduction *– An introduction made deliberately by humans, involving the purposeful movement of a species outside of its natural range and dispersal potential. Such introductions may be done legally or illegally.*

Introduction *– The movement by human agency of a species, subspecies or lower taxon outside its natural range. This movement can be either within a country or between countries.*

Invasive alien species *- Alien species that become established in a new environment, then proliferate and spread in ways that are destructive to native ecosystems, human health, and ultimately human welfare.*

Native species *– A species occurring within its natural range and dispersal potential, i.e. within the range it occupies naturally or could occupy without direct or indirect introduction or by care of humans. Those plants and animals that occurred when Columbus arrived.*

Sanitary or phytosanitary measure *– Any measure applied: To protect animal or plant life or health within a country from the risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms;*

Unintentional introduction *– An unintended introduction made as a result of a species utilizing humans or human delivery systems as vectors for dispersal outside its natural range.*

5.2.6 Priority Construction Activities & Potential Impacts

Potential Impacts associated with invasive species during construction include:

- Spread of invasive species from existing individuals on the site
- Introduction of additional individuals of existing species
- Introduction of new plant and animal invasive species

Pathways for spread and introduction of invasive species during construction include:

- Regeneration of plants from improper removal
- Transfer of seeds and other propagative parts from one location to the next
- The introduction of invasive plants for landscaping
- The introduction of invasive animals with the importation of plants for landscaping

5.2.7 Management Strategy

5.2.7.1 Training

Site Induction:

Potential impacts associated with invasive species will be included in the site induction training to be administered to all personnel on site before commencement of any works. Invasive species of concern will also be included in the site induction.

Toolbox Talks:

Toolbox talks outlining the works methodology will be administered before the execution of tasks to ensure that all personnel involved understand the potential impacts and how works are to be executed to avoid or minimize identified impacts. Topics will include:

- Invasive Species Identification
- Herbicide Application procedure
- Proper disposal of debris
- Proper disposal of product
- Invasive species identification

- Invasive species sighting response procedure

5.2.7.2 Removal of existing invasive species

Of the 13 invasive species observed, there are three species of concern: *Scaevola taccada*, Hawaiian Seagrape, *Leucaena leucocephala*, Jumbey and *Schinus terebinthifolius*, Brazilian Pepper. Strategies for each species are detailed in the sections below.

5.2.7.2.1 *Scaevola taccada* (Hawaiian sea grape)

Scaevola taccada, Hawaiian Seagrape was observed in the human altered areas of the site. The invasive species strategy of the Bahamas recommends eradication of this species. To prevent the establishment of this species on site there is a current removal program, however, improper removal and disposal can result in redistribution of this species.

Complete removal (root system included) of individuals of this species can be achievable by manual or mechanical removal.

In the instance where accessibility by equipment is a challenge the plant should be manually removed and the stump treated with herbicide to prevent sprouting.

It may be necessary to perform multiple removal exercises for this species as seeds below the plant will germinate quickly once the parent plant is removed and more light is available. Also, this species sprouts easily from pieces of the root or branches that are left behind. Seedlings emerging after removal of the parent plant should be weed out.

5.2.7.2.2 *Leucaena leucocephala* (Jumbay)

Leucaena leucocephala, Jumbey was observed in abundance at human altered areas and within the dry broadleaf evergreen formation along the edges of roads and trails. Individuals observed are predominantly mature seedbearing plants which presents the potential for spread of this species with improper removal and disposal techniques.

All parts (root system included) can be mechanically removed. In the instance where accessibility by equipment is a challenge the plant should be manually removed and the stump treated with herbicide to prevent sprouting.

2.2.7.2.3 *Schinus terebinthifolius* (Brazilian Pepper)

Schinus terebinthifolius, Brazilian Pepper was observed in human altered areas on site. Individuals observed are predominantly mature seedbearing plants which presents the potential for spread of this species with improper removal and disposal techniques.

5.2.7.2.4 Shoreline removal

When removing Invasive species from along the shoreline, if it is determined that removal may result in erosion, a phased approach will be taken where some plants will remain in place and removed at another time when replacement plants have become established.

Factors to consider in determining use of a phased approach include:

1. Is there erosion currently at the location? If so, removal of large areas of vegetation will loosen sediment and can result in further erosion.
2. What is the extent of the removal along the shoreline? Removal should take place in small sections less than 20 feet if there is existing erosion.

5.2.7.2.5 Upland removal

To prevent damage to retained vegetation, invasive species within the interior of the site that are not within areas to be developed should be manually removed and the stumps treated with herbicide to prevent regrowth.

5.2.7.2.6 Herbicide Treatment Method

Stumps of invasive species should be treated with a herbicide like Pathfinder II® Triclopyr. This product is comprised of 13.6% butoxyethyl ester and 86.4% inert ingredients – nonpetroleum natural base oil solvent.

While the use of herbicides can enhance native plant communities by removing undesirable species and increasing native species, there is the potential for exposure and impacts to human health, non-target organisms, and the environment.

Herbicide applicators generally face the greatest risk and potential for exposure, particularly during mixing and loading. Non-users can be affected by direct contact through spray drift and accidental spills and indirect contact through consumption of contaminated food or water.

As herbicides have been designed to target biochemical processes, such as photosynthesis, that are unique to plants they typically are not acutely toxic to animals, however, data indicates that some

herbicides can have subtle, but significant, physiological effects on animals, including developmental effects.

Exposure can be from spills or leaks, improperly discarded herbicide containers, and disposal of rinsing water. Contamination can also occur due to surface runoff or leaching of herbicides. Spray drift and volatilization of herbicides can transport the chemical into the atmosphere during and after application, potentially allowing herbicides to reach surface water and groundwater via precipitation.

Improper use or misapplication can increase these risks. To minimizes herbicide exposure, follow herbicide label instructions and established safety procedures including:

Application procedure:

- The safest and easiest approach is to carefully paint the entire stump top with the herbicide after cutting.
- To increase effectiveness, ensure that herbicide is applied just inside the bark around the entire circumference.
- Cut stump treatments should not be applied when rain is expected within 4 to 6 hours.
- Follow the herbicide label and use the required personal protective equipment including eye protection and gloves.
- Avoid leather gloves and leather boots when applying herbicides as they will readily adsorb many herbicides.

Disposal of Debris:

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. One of the reasons that invasive species are prolific is that many of them reproduce by more than one mechanism. In some instances, like with Scaevola taccada (White Inkberry) propagation can occur from all parts of the plants. The onsite EO will verify that debris from invasive species removal are disposed of in lidded bins labelled green waste, removed from the site and disposed of at the waste disposal site on Snake Cay Abaco.

Disposal of products:

Proper disposal of unused herbicide and cleaning of container for herbicide mixing is also essential. Containers with unused mix should not be left in the field. All unused portions of herbicide mix should be discarded in a container that is labelled and discarded as hazardous waste as per the waste management plan. Containers used for mixing should be designated for this tasked specifically, labelled to identified designated use and discarded as hazardous waste upon completion of the exercise. Disposal should be as per hazardous material disposal guidelines outlined in the waste management plan.

5.2.7.3 Prevent Introduction of New Invasive Plant & Animal Species

In addition to removing existing invasive species and ensuring that there is no spread of invasives from the removal exercise, there should be no introduction of new invasive species to the site asa result of the project.

The potential pathway for introduction of invasive species is through the shipment of supplies for the project. Specifically, there is a concern for the introduction of:

- Cane toads (*Rhinella marina*), Green Iguana (*Iguana iguana*), Corn Snake (*Pantherophis guttatus*) and Knight anole (*Anolis equestris*) which can be "hitchhikers" in plant material shipped from outside of the country.
- Accidental inclusion of invasive plant species for landscaping.

Biosecurity protocols to prevent introduction of invasive species to the site will involve preventive measures and procedures to respond to incursions.

Preventative measures:

- No invasive species should be allowed on the landscape palette.
- Local procurement of plants should be a first option.
- Upon arrival and offloading of plants, a plant inventory and inspection should be conducted to ensure that plants present are as per the approved landscape palette.

Any invasive plant material should be disposed of as green waste as per the waste management plan.

Invasive Species sightings response protocol

Should there be a sighting of an invasive species the following actions are to be taken:

- For all sightings, the EO should be notified immediately.
- If sighting is at the time of offloading, every effort should be made to capture the animal.
- Staff will be advised to try and capture an image of the animal to assist in identification of the organism and verification of its status as an invasive species.
- The EO will log the incident into the BESTPROTECT242 APP and contact the DEPP via telephone.
- An incident report will be prepared by the EO and forwarded to the DEPP in the bi-weekly reporting.

LANDSCAPE MANAGEMENT PLAN

5.3 Landscape Management Plan

5.3.1 Introduction

The development proposes to utilize native species in the landscaping as a mitigation for habit loss. Planting of native tree and shrub species throughout the island, particularly those species that bear fruit that will serve as food for resident and migrant avifauna species. Landscape design within the upland development area will also include some native drought tolerant plant species which will reduce water demands on the project. Once these native species become established, their dependence upon project water will be significantly reduced.

While this exercise will result in a positive impact on native flora and avifauna, there are potential negative impacts associated with the activity including unintentional introduction of invasive plant and animal species and introduction of pest and disease.

5.3.2 Purpose

The purpose of this plan is to ensure that potential impacts associated the landscaping exercise are addressed. Specifically, this plan aims to:

- prevent the reestablishment of invasive species
- Increase wildlife habitat
- ensure that new invasive plant and animal species are not introduced to the island
- prevent the introduction of plant pest and disease
- ensure that appropriate species are used that are suitable for the habitat and surrounding areas

5.3.3 Applicable Legislation

The following national legislations relevant to the physical and natural environment apply to activities associated with landscaping.

- Wild Birds Protection Act (Amended 1994)
- Environmental Health Services Act (Amended 2004)
- Conservation and Protection of the Physical Landscape of The Bahamas Act (Amended 2010)
- The Bahamas National Trust Act (Amended 2010)
- The Forestry Act (2010)
- Environmental Planning and Protection Act (2019)

5.3.4 Related Plans

This plan is to be used in conjunction with the Montage Cay Project EMP in its entirety and has overlapping elements with the following specific plans:

- Biodiversity Management Plan (detailed in section 5.1)
- Invasive Species Control Plan (detailed section 5.2)
- Dust Control Plan (detailed in section 5.7)
- Fuel Spill Prevention and Control Plan (detailed in section 5.8)

5.3.5 Definitions

The following definitions relating to terminology used in this plan are listed in the Bahamas National Invasive Species Strategy (2013) as:

Intentional introduction *– An introduction made deliberately by humans, involving the purposeful movement of a species outside of its natural range and dispersal potential. Such introductions may be done legally or illegally.*

Introduction *– The movement by human agency of a species, subspecies or lower taxon outside its natural range. This movement can be either within a country or between countries.*

Invasive alien species *- Alien species that become established in a new environment, then proliferate and spread in ways that are destructive to native ecosystems, human health, and ultimately human welfare.*

Native species *– A species occurring within its natural range and dispersal potential, i.e. within the range it occupies naturally or could occupy without direct or indirect introduction or by care of humans. Those plants and animals that occurred when Columbus arrived.*

Sanitary or phytosanitary measure *– Any measure applied: To protect animal or plant life or health within a country from the risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or diseasecausing organisms;*

Unintentional introduction *– An unintended introduction made as a result of a species utilizing humans or human delivery systems as vectors for dispersal outside its natural range.*

5.3.6 Priority Construction Activities & Potential Impacts

Potential Impacts associated with landscaping include:

- Unintentional introduction of new invasive plant and animal species through importation of plants
- introduction of plant pest and disease

5.3.7 Management Techniques

5.3.7.1 Plant Selection

Plants selected for landscaping should be based on the following criteria:

- No invasive species should be permitted on the landscape palette
- No banned species should be permitted on the landscape palette (e.g. Citrus sp. from Florida)
- A ratio of 1:1 Natives to non-invasive non-native species should be considered

Native species selected should consider the following:

- Species present on the site currently
- Native plants that can be a food source for avian species
- Protected species

5.3.7.2 Plant procurement procedure

To safeguard against the introduction of plant pest and disease:

- Local procurement of plants will be a first option
- When purchasing from outside of The Bahamas, a phytosanitary certificate from the point of origin, certifying that plants are free from pest and disease, will be provided for all imported plants.
- Upon arrival, plants should be inspected by a professional trained in identifying plant pest and disease.

MARINE ENVIRONMENT MANAGEMENT PLAN

5.4 Marine Environment Management Plan

5.4.1 Introduction

Marine resources are considered precious in The Bahamas as it supports two of the country's major industries - Tourism and Fisheries. Bahamian Fisheries regulations are aimed at an integrated management of the fishery resources, coastal zone, and the marine environment for the wellbeing of the Bahamian Environment.

While there will be no works directly in the water, there may be potential impacts to the marine environment through runoff from upland work and these activities should be managed to avoid or minimize impacts.

5.4.2 Purpose

The purpose of this Marine Environment Management Plan is to ensure that potential impacts to marine environment during construction are addressed. Specifically, this plan aims to:

- Preserve marine life habitats
- Prevent unintentional and intentional harm to the marine environment

5.4.3 Applicable Legislation

The following national legislations relevant to the physical and natural environment apply to marine environment management.

- The Bahamas National Trust Act (Amended 2010)
- Fisheries Resources (Jurisdiction and Conservation) Act and regulations

5.4.4 Related Plans

This plan is to be used in conjunction with the Montage Cay EMP in its entirety and has overlapping elements with the following specific plans:

- Invasive Species Control Plan (detailed section 5.2)
- Landscape Management Plan (detailed in section 5.3)
- Waste Management Plan (detailed in section 5.6)
- Fuel Spill Prevention and Control Plan (detailed in section 5.8)

5.4.5 Priority Construction Activities & Potential Impacts

Potential Impacts associated with marine life management include:

Landscaping

- Runoff from herbicide and pesticide use

Turbidity

- Sedimentation runoff and turbidity from land clearing

Fuel Storage and handling

- Oil and fuel spills from storage and handling for construction equipment and vessels
- Hazardous waste contamination due to hurricanes conditions

Waste storage

- Sanitary waste leaks and spills from portable potty
- Improper waste storage resulting in debris such as plastic being blown into ocean

Fisheries violations

- Recreational fishing by employees that can result in violations in fisheries regulations including overfishing, disregard of closed seasons malicious harm to marine life such as sharks

5.4.6 Management Techniques

Management techniques outlined in this section relates to impacts associated with sediment control and fisheries violations as other potential impacts identified are addressed elsewhere in the document. Specifically, a Fuel Spill Prevention & Control Plan is provided in section 5.8; a Waste Management Plan is provided in section 5.6.; a Landscape Management Plan in section 5.3 and a hazardous material storage & handling in section 5.5.2.7.1.

5.4.6.1 Sediment Control

Sediment control measures outline related to the potential impacts associated with the construction of the landing facility on Marsh Harbour.

Turbidity is a measure of the degree to which water loses its transparency due to the presence of suspended particulates. The more total suspended solids in the water, the higher the turbidity. Waterborne sediment not only affects water clarity but can also collect on marine flora and fauna resulting in suffocation and eventual death of organisms. Turbidity control will be managing in three ways: 1. control the amount of turbidity from the source (source control), 2. containment of sediment released (primary control) and 3. monitoring of sediment levels (secondary control).

1. **Control:**

- The first effort will be to limit the amount of turbidity generated due to the activity.
- Every effort should be made to conduct works during favorable weather conditions.

- The Contractor should monitor weather conditions and the turbidity generating activity should temporarily cease if weather conditions are unfavorable; resulting in turbidity levels that are at, or near the established threshold (see monitoring section below for threshold details).

2. **Containment:**

- Turbidity generated by construction activities should be contained by the installation of turbidity curtains.
- A turbidity curtain is a floating sediment control barrier that is installed in water bodies to contain suspended sediments associated with construction activities. The curtain is a flexible material that extends downward from the water surface and is maintained in a vertical position by floatation material at the top and an anchoring mechanism at the bottom. Turbidity curtains control sediment through settlement. The curtain acts as a containment barrier for suspended sediment and allows particles to settle.
- Turbidity curtains should be deployed prior to drilling for piles.
- Turbidity curtains should be inspected daily and maintained as necessary (protocols for inspection detailed below).

Turbidity Curtain installation:

- A method statement for the installation of the turbidity curtains should be provided by the Contractor.
- The locations for the turbidity curtain placement should be included in the method statement.

Turbidity Curtain installation steps should include the following:

1. Lay out sections of turbidity curtains on land.
2. Connect sections until the required length is achieved.
3. Sections should be securely connected as per the manufacture's recommendations for the brand.
4. The assembled curtain should be towed to the desired location and set-in place according to the placement outlined in the approved construction method statement.
5. Anchor the curtain as per the manufacturer's specifications for the product.
6. Release the panels when the turbidity curtain is in the desired position and anchored.

Protocol for Inspection of Turbidity Curtains:

- Turbidity curtains should be inspected after installation and daily before the start of works to ensure that there are no breaches in the connection points that would allow sediments to escape.
- The Environmental Officer or their assign will conduct in water inspections by swimming along the path of the turbidity curtain.

- If damage or weak points are noted, repairs should be made as needed prior to commencement of works.
- If there is a breach in the curtain during the execution of works, activities should be stopped immediately, repairs should be made and works recommenced after a turbidity reading below the prescribed threshold is achieved.

Turbidity Monitoring Protocol:

- Turbidity is measured in Nephelometric Turbidity Units - NTU.
- The instrument used for measuring turbidity is called nephelometer or turbidimeter.
- Baseline turbidity levels at the site should be taking prior to the start of works.
- A threshold of 29 NTU above background reading should be used as a maximum turbidity level.
- Turbidity monitoring readings should be taken every 3 hours for a 12 hr. workday.
- The EO shall oversee pile driving works and request additional monitoring reading based on visual observation of turbidity levels during execution of works.
- Turbidity readings should be undertaken by the Contractor and witnessed by the EO.
- Measurements should be conducted during the active working operations.
- Monitoring should be conducted for the duration of the turbidity generating activity.
- If test results are near prescribed levels, operations/ methodology should be modified as needed.
- If test results exceed prescribed levels, dredging should temporarily cease until turbidity has settled and a turbidity reading is taken that indicates levels are below the prescribed threshold.
- Works methodology should also be adjusted in response to excess turbidity e.g work should cease during periods of intense wave activity which can contribute to excess turbidity.

3. **Turbidity measurement protocols**

The following actions should be taken when collecting turbidity measurements:

- The turbidity meter should be calibrated at the beginning of each sampling session.
- Samples should be taken at the densest part of the turbidity plume.
- Samples should be taken two feet from the surface of the water.
- Daily monitoring logs should be kept and should include the following information for each sample (See Appendix 2 for Turbidity Monitoring Report template):

  1) Date and time of day of sampling

  2) Weather conditions

3) Tidal stage and direction of flow

4) Wind direction and magnitude

5) Latitude / Longitude coordinates of each sampling location

6) A description of any factors influencing the turbidity generating activity at the time of the monitoring

7) Final measurements

- Turbidity monitoring shall be included in the bi-weekly (twice per month) environmental report submitted to DEPP by the EM.

Removal of Turbidity curtain:

- Installation of turbidity curtains for prolonged periods can result in stagnant waters enclosed in the curtain.
- Turbidity curtains will be removed after completion of works and when all sediments within the turbidity enclosure is settled.

5.4.6.2 Fishing Regulations

Fishing is a favorite past time of Bahamian citizens and a major source of food for many in The Bahamas. As the works are surrounded by sea there is the potential for workers to fish while on the site and in doing so they may intentionally or unintentionally violate fisheries regulations.

- Employees shall be educated on Fisheries regulations including catch sizes for Nassau Grouper, Queen Conch, and Spiny lobster; and closed seasons for various species and species prohibited from catch such as sharks and turtles.
- Signage shall be posted as reinforcement of fisheries regulations.

Protection of marine organisms

While some marine fauna are mobile and are able to move from the area where dock construction is ongoing to areas outside the impact zone, there are epifauna that are immobile and slow-moving fauna that might not be able to move safely in a timely manner. Management techniques to address this concern include:

- Inspection of the area of potential impact by the EO prior to commencement of works
- Removal and relocation of slow-moving fauna outside of the area of impact by the EO

There is a general fear of sharks by many Bahamians and the response to seeing one near shore is typically to kill or harm it. Management techniques to address this concern include:

- Workers will be educated on the importance of sharks and advised that killing or harming them is strictly forbidden.
- Signage will be installed as a reinforcement.

GROUNDWATER MANAGEMENT PLAN

5.5 Groundwater Management Plan

5.5.1 Introduction

Rainwater is the only source of freshwater in The Bahamas. Freshwater resources in The Bahamas are finite and vulnerable and are considered scarce according to the United Nations criteria. Construction activities should not impact ground water quantity or quality.

5.5.2 Purpose

The purpose of this plan is to ensure that potential impacts to groundwater during construction are addressed. Specifically, this plan aims to:

- Outline procedures for sourcing water to facilitate construction activities
- Decrease the likelihood of groundwater contamination
- Identify control, containment and clean up measures for fuel handling and storage
- Identify control, containment and clean up measures for sanitary waste

5.5.3 Applicable Legislation

The following national legislations relevant to the physical and natural environment apply to groundwater management.

- Environmental Health Services Act (Amended 2004)
- The Forestry Act (2010)
- Environmental Planning and Protection Act (2019)
- Water & Sewerage Corporation Act (Amended 2015)

5.5.4 Related Plans

This plan is to be used in conjunction with the Montage Cay EMP in its entirety and has overlapping elements with the following specific plans:

- Waste Management Plan (detailed in section 5.6)
- Fuel Spill Prevention and Control Plan (detailed in section 5.8)

5.5.5 Definitions

For the purpose of this report groundwater contamination refers to man-made products such as gasoline, oil and chemicals that get into the groundwater and cause it to become unsafe and unfit for human use.

The following definitions relating to terminology associated with water resources have be adopted from the U. S. Geological Survey (USGA) water glossary:

***aquifer**--a geologic formation(s) that is water bearing. A geological formation or structure that stores and/or transmits water, such as to wells and springs. Use of the term is usually restricted to those water-bearing formations capable of yielding water in sufficient quantity to constitute a usable supply for people's uses.*

***desalination**--the removal of salts from saline water to provide freshwater. This method is becoming a more popular way of providing freshwater to populations.*

***drawdown**--a lowering of the groundwater surface caused by pumping.*

***freshwater, fresh water**--water that contains less than 1,000 milligrams per liter (mg/L) of dissolved solids; generally, more than 500 mg/L of dissolved solids is undesirable for drinking and many industrial uses.*

***groundwater**--(1) water that flows or seeps downward and saturates soil or rock, supplying springs and wells. The upper surface of the saturate zone is called the water table. (2) Water stored underground in rock crevices and in the pores of geologic materials that make up the Earth's crust.*

***injection well**--refers to a well, constructed for the purpose of injecting treated wastewater directly into the ground. Wastewater is generally forced (pumped) into the well for dispersal or storage into a designated aquifer. Injection wells are generally drilled into aquifers that don't deliver drinking water, unused aquifers, or below freshwater levels.*

***leaching**--the process by which soluble materials in the soil, such as salts, nutrients, pesticide chemicals or contaminants, are washed into a lower layer of soil or are dissolved and carried away by water.*

***water quality**--a term used to describe the chemical, physical, and biological characteristics of water, usually in respect to its suitability for a particular purpose.*

***withdrawal**--water removed from a ground- or surface-water source for use.*

5.5.6 Priority Construction Activities & Potential Impacts

Potential Impacts to groundwater supply during the construction include:

- Contamination from hydrocarbon spills from fuel storage and handling
- Contamination from sanitary waste
- Contamination from hazardous material storage and handling

5.5.7 Management Strategy

5.5.7.1 Ground Water quantity

The main source of water will be from an existing reverse osmosis.

5.5.7.2 Groundwater quality

Management strategies to maintain baseline groundwater quality include best management practices for fuel spill prevention and control; waste management; hazardous material storage and handling; and monitoring through testing.

Management techniques outlined in this section relates impacts associated with hazardous material storage & handling and as other potential impacts identified are addressed elsewhere in the document. Specifically, fuel handling and storage BMP are detailed in the Fuel Spill and Prevention Control Plan outlined in section 5.8; and Sanitary waste management BMP are detailed in the Waste Management Plan outlined in section 5.6.

5.5.7.2.1 Hazardous Material Storage and Handling

Hazardous materials to be used on site, which through exposure or contact with rain may present an impact to the terrestrial and marine environment include cement and herbicide to be used in the invasive species removal exercise and concrete.

1. **Storage:**
   - Hazardous material should be stored on a containment pad in the laydown area.
   - Material should be covered to prevent the potential for mixing with water and release of substance into the environment.
   - Excess material should be removed from the site immediately upon completion of works.
   - Hazardous material storage will be inspected daily by the onsite Environmental Officer during site inspections.
2. **Disposal**:
   - Unused mixed material will be discarded as hazardous waste and subject to protocols outlined section 5.6 Hazardous Waste Management.
3. **Remediation**:

The following actions should be taken in the event of a hazardous material spill:

- The supervisor should advise the Environmental Officer (EO) immediately.
- The product should be cleaned up immediately using absorbent pads and the soil material around the spill excavated to a depth of clean soil.
- The excavation should be backfilled with clean material.
- Spill clean-up material, including soil, shall be placed in a container label hazardous waste and stored on the containment pad until removal from the island for disposal in the NPEP.
- The EO should log the incident into the BESTPROTECT242 APP and contact the DEPP via telephone.

- The contractor should provide an incident report to the Environmental Manager (EM) within 48 hours of a spill and the EM should submit incident report in the bi-weekly (twice per month) report to DEPP.

There is an existing area of contamination on the site that should be remediated as indicated above.

WASTE MANAGEMENT PLAN

5.6 Waste Management Plan

5.6.1 Introduction

Improper disposal of waste can lead to disease causing pest such as flies, mosquitos and rats. As While no rats (*Rattus sp.*) were observed during the baseline data collection, the island is partially developed and it is likely that individuals might be on the site. Proper waste management is vital to ensure that there is not an explosion in the rat population with the increases human presence and activities such as an increase in food source.

Inadequate waste management can also have an impact on the marine environment if debris is allowed to reach open waters. This comprehensive plan addresses waste management during construction.

5.6.2 Purpose

The purpose of this plan is to ensure that potential impacts associated with waste management during construction are addressed. Specifically, this plan aims to:

- Prevent pollution in the terrestrial and marine environments
- Promote healthy environment for workers

5.6.3 Related Plans

This plan is to be used in conjunction with the Montage Cay Project EMP in its entirety and has overlapping elements with the following specific plans:

- Biodiversity Management Plan (detailed in section 5.1)
- Invasive Species Removal & Control Plan (detailed in section 5.2)
- Landscape Management Plan (detailed in section 5.3)
- Marine Environment Management Plan (detailed in section 5,4)
- Groundwater Management Plan (detailed in section 5.5)

5.6.4 Potential Impacts

Potential Impacts associated with waste management include:

- Groundwater and coastal water contamination from cement, fuel and sanitary waste - handling, storage, disposal and spills
- Dispersed solid waste from unsecure storage sites
- Marine pollution
- Rodent and vector attraction/breeding
- Fire hazards

5.6.5 MANAGEMENT TECHNIQUES

5.6.5.1 Waste Handling and Storage

The following general waste management practices should apply for all waste generated on site:

- Ensure that an adequate number of appropriate waste containers are available on site as indicated in table 5.6-1.
- Clean up debris and litter from construction site daily.
- Segregated waste into waste class as outlined in chart 5.6-1 on waste classification.
- All waste generated should be kept in appropriate waste containers (see table 5.6-1).
- Properly labelled containers to indicate the type of waste contained.
- Waste containers should be stored in a designated area.

5.6.5.2 Waste Disposal

- Waste will be removed from site as needed by the locally engaged waste management contractor and transported to the waste disposal site on Snake Cay, Abaco.

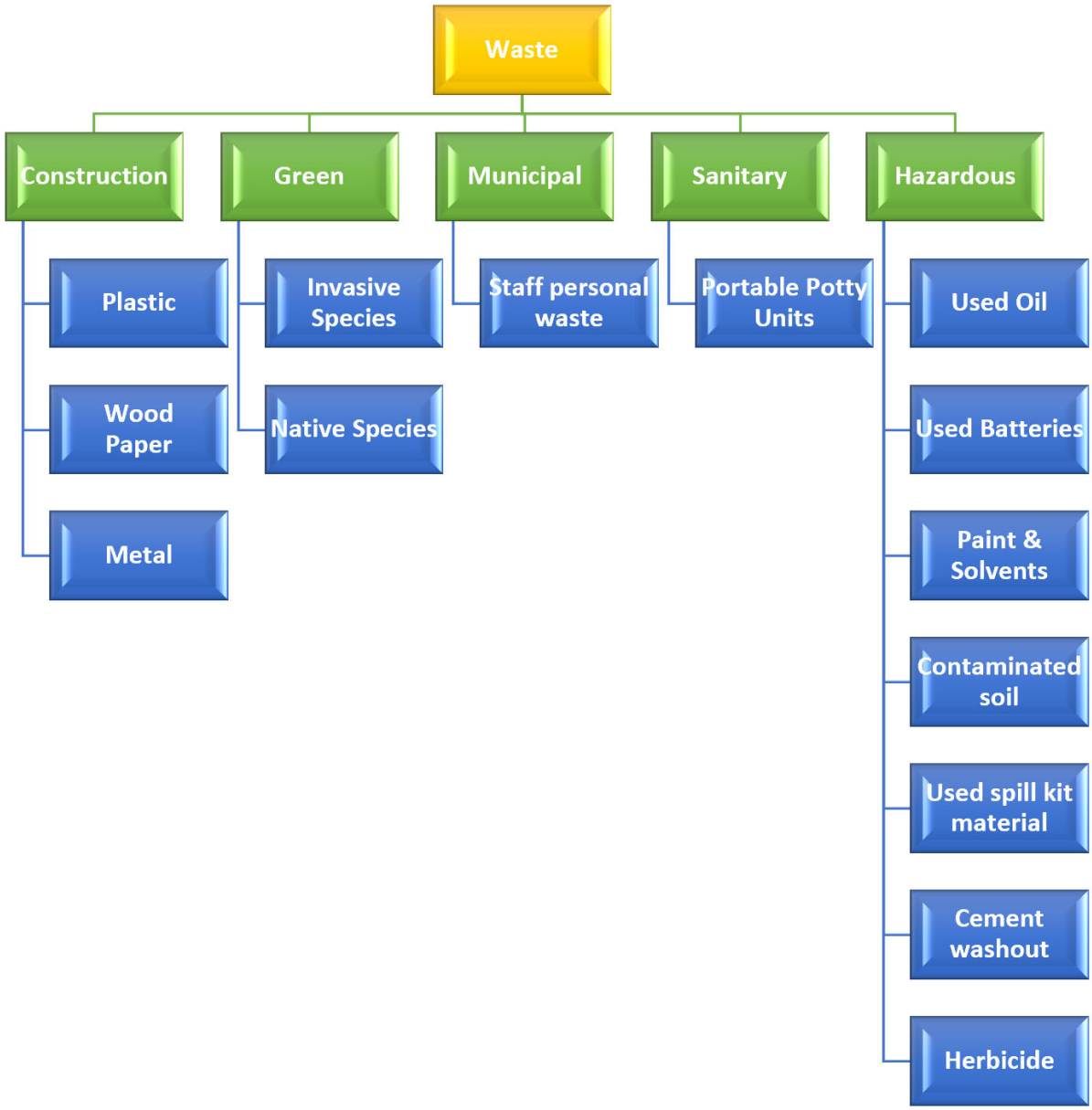
Table 5.6-1: Waste Storage Containers Guide for Montage Cay Project during Construction

Waste Class	Type of Waste	Appropriate Container	Example
Construction Green Municipal	Wood Plastic Metal Land clearing Vegetation Staff (final site disposal)	Commercial Bins	
	Staff (daily disposal)	Trash Receptacles	
Hazardous	Used Batteries	Used Battery Bin	
	Used oil Contaminated soil Used spill kit products Paint & Solvents	55 gallons Oil Barrels	
Sanitary	Used oil Portable Potties	Intermediate Bulk Container (IBC)	

5.6.6 Waste Classification

There are five (5) classes of waste that will be generated during construction: green waste, construction waste, domestic waste, sanitary waste and hazardous waste. Example of each category of waste applicable to the project is listed in Chart 5.6-1 and described in detail in the sections that follow.

Chart 5.6-1: Waste Classification for Montage Cay Project Construction Phase



5.6.6.1 Green Waste Management

- Green waste will be generated from the invasive species removal exercise and land clearing.
- Vegetative material will be placed in a bin labeled as green waste, removed from the island and disposed of at the waste disposal site on Snake Cay, Abaco.

5.6.6.2 Construction Waste Management

- Construction waste should be removed from workstations and deposited in bins at the end of each workday.
- Construction waste should be segregated in bins labelled 1. plastic, 2. wood and paper, and 3. metal.
- Waste bins should be inspected during daily site inspections.
- Waste bins should be transported to the waste disposal site on Snake Cay, Abaco.
- Material in bins designated for plastic are to be covered to prevent contents from blowing into upland or marine areas.
- Plastics entering the marine environment can be harmful to marine organism. Any plastic material that reaches the marine environment should be immediately retrieved and placed in the appropriate waste bin and secured.
- Shrink wrap and other plastic coverings should be rolled tightly after being removed from package to prevent them from being carried by the wind.
- Plant pots from the landscaping exercise should be stacked and secured until removal from the site.

5.6.6.3 Hazardous Waste Management

Hazardous waste on the site will include used oil, used and damaged batteries, paint cans, cement washout, used spill kit material and herbicide. Used oil storage, handling and cleanup is detailed in section 5.8 Fuel Spill Prevention and Control Plan. Other hazardous waste management techniques include:

- Hazardous waste stored on the containment pad should be separated based on the type of material.
- Waste containers should be inspected by the on-site Environmental Officer daily for labeling and leaks.
- Employees and subcontractors should be educated on the handling, storage, disposal and clean-up of hazardous materials/ waste as per the Spill Prevention and Control Plan.
- Hazardous waste bins will be removed from the site by the Contractor and deposited in the NPEP.
- Runoff from uncured concrete, concrete wash water or other chemicals may be high in pH and are considered harmful to fish and aquatic life; therefore, there should be no contact with open water through spillage, hosing off surfaces, rain, cleaning of tools or concrete wash out.
- A concrete washout should be established.
- Signage should be installed indicating the concrete washout area.
- Concrete washout contents can be crushed and reused on the project as backfill and subbase material.

5.6.6.4 Sanitary Waste Management

Portable potties will be provided for workers on site during the construction phase to handle sanitary waste and should be handled as follows:

- Units should be installed on a concrete pad or a filled based containment pad with a liner and berm.
- Portable units should be securely fastened to prevent toppling over by high winds or equipment.
- Units should be located more than 100ft from the edge of the open water or wetland.
- Employees should be provided with the location of restroom and directional signage installed.
- The units should be inspected by the on-site Environmental Officer daily and serviced by the contractor weekly (or as needed).
- The units will be serviced by pumping contents into existing septic systems.
- Waste should not be buried onsite.

5.6.6.5 Municipal Waste Management

Municipal Waste generated from the project will consist of general refuse from site workers.

The following measures apply in municipal waste management:

- Trash bins should be conveniently located within work and break areas.
- Trash bins should be fitted with a lid to discourage flies and rodents.
- Bins should be emptied in larger skip in the laydown area at the end of each workday.
- Any plastic material that reaches the marine environment should be immediately retrieved and secured.

NOISE, LIGHT & AIR POLLUTION CONTROL PLAN

5.7 Noise & Air Pollution Control Plan

5.71 Introduction

The site is located on an island that is approximately 4 miles from the centre of Marsh Harbour, the nearest inhabited islands thus the social impacts associated with noise and air pollution are minimal. None the less, appropriate measures should be included to minimize impact on the environment particularly in the case of air pollution.

5.7.2 Purpose

The purpose of this plan is to ensure that potential impacts associated with noise and air quality during construction are addressed.

5.7.3 Applicable Legislation

- Environmental Health Services Act (Amended 2004)
- The Bahamas National Trust Act (Amended 2010)
- The Forestry Act (2010)
- Department of Environmental Planning and Protection Act (2019)

5.7.4 Priority Construction Activities & Potential Impacts

The following potential Impacts during the construction have been identified:

- Noise exposure impact on workers
- Air pollution from dust and equipment emissions contribute to greenhouse gases and poor human health

5.7.5 Management Strategy

5.7.5.1 Noise Control

Construction noise impacts from this Project are associated with worker exposure to intense noise levels which overtime can result in hearing damage.

The following construction impact minimizing techniques will be implemented to address noise impacts:

- The Contractor should maintain equipment in good order to minimize unnecessary noise.
- Equipment should be turned off when not in use and not allowed to idle.
- All construction workers in the vicinity of noise generating machinery or works should be provided with heavy duty ear protection and required to wear them.
- Noise levels should be monitored daily by the onsite Environmental Officer.

- A handheld device will be used for noise monitoring.
- If noise levels exceed prescribed thresholds the approach to the activity should be adjusted or equipment serviced to address mechanical issues that might be contributing to excessive noise.
- Noise level thresholds to be established by DEPP.

5.7.5.2 Air Pollution Control

5.7.5.2.1 Dust Control

Dust is a potential impact associated with construction activities such as land clearing. Dust is created when fine particles of sediment become airborne. Disturbance of sediment during construction activities and exposure of loose sediment after land clearing has the potential to generate dust. Dust build up on vegetation can reduce photosynthetic ability and gas exchange which can result in die back and eventual death of plants.

Measures to be implemented during construction to minimized dust and maintain air quality include:

- Dust generating works should be scheduled when weather conditions are favorable to decrease dust spread from high winds
- Dust control and dust build up on vegetation will be monitored by the on-site environmental officer during daily site inspections.
- Dust suppression equipment such as a water truck or water cannon should be used to control dust build up on vegetation as needed based on site inspection.

5.7.5.2.2 Emissions Control

A significant environmental concern from construction equipment is emissions of air pollutants that impact air quality, contribute to climate change and cause a health concerns for construction workers. The main source of air pollution emissions on construction sites are poorly maintained equipment and idling engines.

Air quality control measures to minimize or avoid construction phase air quality impacts from emissions should include:

Equipment Maintenance and Operation:

- Equipment to be used on site should be in good working condition to prevent excessive emissions
- Equipment should be turned off when not in use and not allowed to idle.

Air Quality Monitoring:

- Prior to the beginning of works, a baseline air quality assessment should be taken.
- Dust and Emissions should be monitored during daily site inspections by the onsite Environmental Officer.

- Monitoring should include visual observations as well as the use of an air quality monitoring device.
- Monitoring to be measured against air quality standards established by DEPP.
- Equipment with visible excess emissions should be removed from use until the necessary repairs are made to address the concern.

5.7.5.2.3 Erosion Control

Erosion, Sediment and Runoff Control Best Management Practices

Best management practices can be organized by the function they perform. General maintenance BMPs (listed below) are usually vegetative practices used to contain polluted runoff from the operation of highways or from erosion and sedimentation generated at small construction sites. Varieties of practices are used at construction sites to control both erosion and polluted runoff. These are identified as Construction Site BMPs. Practices developed as permanent erosion and sediment control devices are both structural and nonstructural. Several of these BMPs are listed below as long-term or Permanent Control BMPs.

Construction Site BMPs

Straw bale barriers should be bound, entrenched, and securely anchored to prevent deterioration. A row of straw bales slows runoff flow and creates a pond behind the barrier where sediment can settle out. Straw bale barriers are most effective for filtering low to moderate storm flows, where structural strength is not required.

Filter fabrics are engineering fabrics designed to retain sediment particles larger than a certain size and allow water to pass through. Filter fabrics can be used in silt fences (see below) or erosion control mats. Erosion control mats protect soil and seed from erosion and can be designed to allow vegetation to grow through the material.

Silt fences are vertical fences of filter fabric that are stretched across and attached to support poles. The fabric retains sediment on the construction site and allows relatively sediment-free water to pass through. Silt fences are placed to protect streams and surrounding property from sediment-laden runoff.

Sediment basins are ponds created by excavation or the construction of a dam or barrier. Sediment basins primarily serve to retain or detain runoff to allow excessive sediment to settle out during construction. Sediment basins can be converted into permanent detention ponds or wetlands after construction.

Stabilized entrances reduce the amount of sediment carried off a construction site by vehicles when pressure-washed on-site. These entrances are designed to include stabilized pads of aggregate underlain with a filter fabric. Stabilized construction site entrances should be located at any point in the construction zone where vehicles enter and leave. Wheels and undercarriages of vehicles should be washed before leaving the site.

EMERGENCY RESPONSE PLANS

5.8 Emergency Response Plans

5.8.1 Introduction

Potential emergencies on the construction site include Fuel Spills, Fire & Explosion, Hurricanes and Medical emergencies.

5.8.2 Purpose

The purpose of this plan is to:

1. define the potential emergencies that are likely to occur during construction
2. outline procedures to decrease the likelihood and severity of emergencies
3. identify control, containment and cleanup measures in the event of an incident

5.8.3 Definitions

Environmental emergency: Any event that causes or has the potential to cause environmental damage.

Hazards: Events that are potentially dangerous to human health or property.

5.8.4 Management Strategy

5.8.4.1 Fuel Spill Prevention and Control Plan

Fuel will be needed during the construction phase for operation of equipment necessary to carry out works. The presence of fuel on site introduces the potential for fuel spills and by extension fires.

Purpose

The purpose of the fuel spill prevention and control plan is to:

- Implement measures to prevent a spill from occurring
- Install control measures to prevent a spill from reaching the environment
- Identify countermeasures to contain, clean up and mitigate the effects of a fuel spill

Potential Impacts

A potential fuel spill can occur during fuel storage and or fuel handling on a construction site. Fuel spills can negatively impact the environment by:

1. Groundwater contamination

The Bahamas' calcium carbonate geological make up and the typical thin layer of soil make it especially vulnerable to groundwater contamination from oil spills that can travel through the porous bedrock and into the groundwater supply.

2. Pollution of coastal waters and wetlands

There is a potential for pollution of coastal waters with the transport of fuel and equipment to and from the site and storage of fuel on site during construction. Fuel spills in the sea and wetland can adversely impact and kill biodiversity supported by these systems.

3. Fires

Fuels are highly flammable and can result in fires. Common ignition sources on construction sites include smoking and open flames.

4. Employee Health & Safety

In addition to environmental impacts there are risks to employee health & safety such as slips and falls that can injure workers. Also, breathing small amounts of hydrocarbon vapours can lead to nose and throat irritation, headaches, dizziness, nausea, vomiting, confusion and breathing difficulties. Clothes soiled during fuel spills can lead to prolonged exposure to fumes. Improper handling of fuel exposed clothing that are transferred indoors to small, poorly ventilated areas can have a greater impact.

Definitions

For the purposes of this plan the following terms will be defined as follows:

Fuel: *any hydrocarbon-based liquid included but not be limited to both new and used hydraulic oils, motor oils, gasoline, diesel and other similar products.*

Rainwater waste: *rainwater that has accumulated within a secondary containment area.*

Polluted rainwater waste: *rainwater waste that contains fuel contamination.*

Unpolluted rainwater waste: *rainwater waste that does not contain any fuel contamination.*

Secondary Containment: *refers to a secondary container used as backup to a primary container for the purpose of providing adequate volume capacity to contain a spill from the primary container.*

Primary Container: *any container that is used to store fuel for the purpose of dispensing for refuelling vehicles and equipment.*

Secondary Container*: a container that provides backup containment to a primary container by providing storage capacity in the amount of 110% of the volume of the largest primary container stored within.*

Management Strategy

1. Fuel Storage

Improper storage of fuel increases the risk of leaks or spills. The risks of fuel spills can be minimized through the implementation of the following best management practices:

- Fuel storage should be located in one designated area within the laydown area.
- Fuel storage area to be fitted with fire extinguisher and spill kits.

- All fuels stored within primary containers on construction sites must be provided with secondary containment.
- The total capacity (gal) of all primary and secondary containers should be clearly marked on all containers.

Figure 5.8-1: Barrel dispenser containment

Figure 5.8-2: Barrel storage containment

Figure 5.8-3: Fuel tank storage containment system

Secondary Containment:

- Secondary Containment shall provide adequate backup storage capacity that would effectively contain a spill from a primary container.
- Secondary Containment shall provide a barrier between the primary storage container and the environment, thereby reducing the potential for soil, surface water and groundwater contamination.
- The secondary containment should be constructed of materials that are capable of adequately containing those fuels stored within (such as concrete, concrete block, plastic and steel).
- Rainwater should not be allowed to collect within the secondary containment system.
- To prevent the ingress of rainwater into the secondary container it should be properly and adequately covered.
- Adequate cover could include a tarpaulin, fitted lid or roof.

Standalone covered spill pallet capable of holding up to four 55-gallon drums.

Pullover cover made of heavy-duty vinyl keeps rainwater and debris out of sump area when stored outdoors.

Custom-fitted cover that can quickly pull over drums to keep rainwater out of pallets.

Figure 5.8-4: Temporary secondary containment cover options

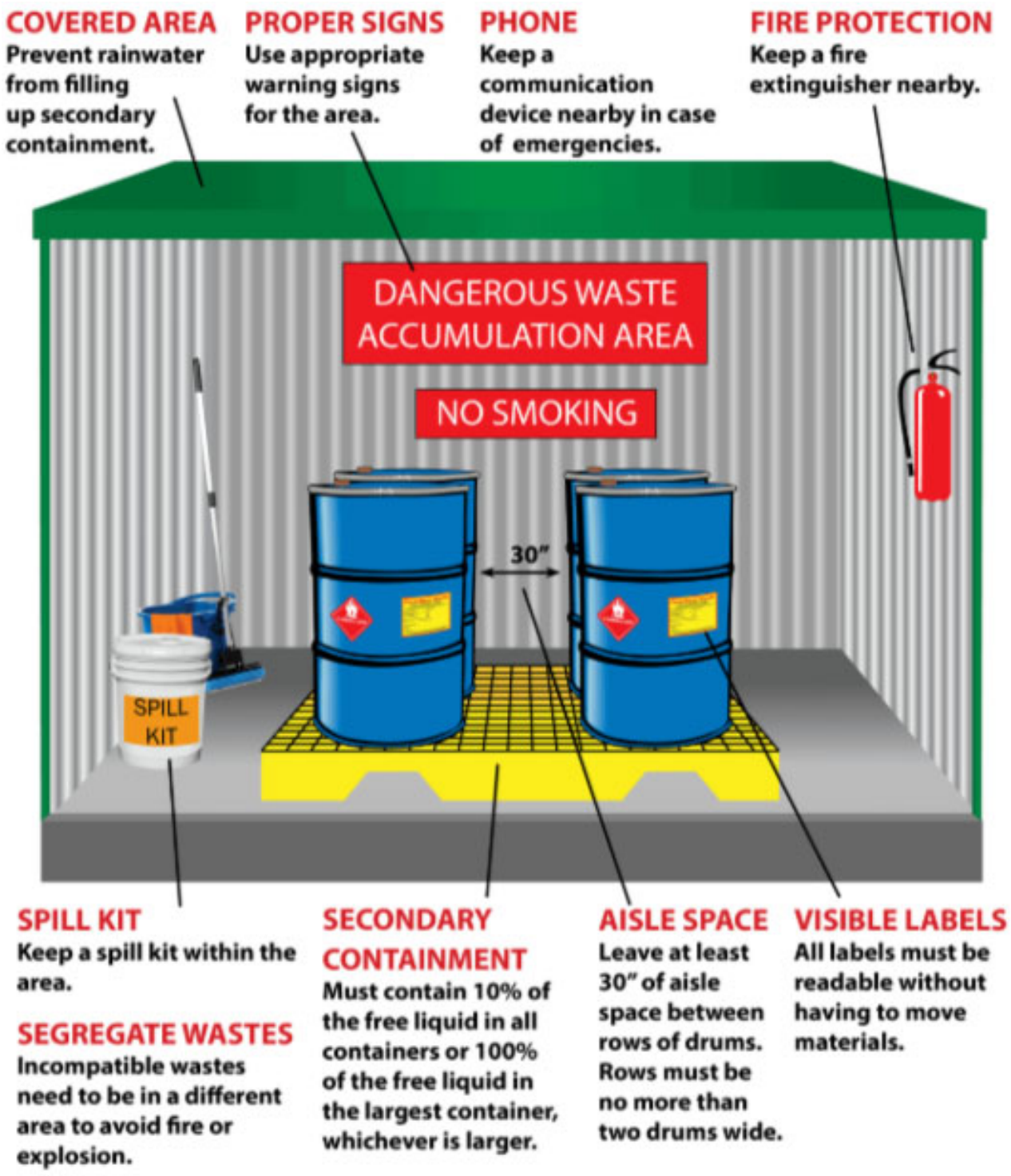


Figure 5.8-5: Example of roof cover secondary containment

- In the case of temporary cover such as a tarpaulin or fitted lid, it must be securely fastened so as to remain effective during inclement weather.
- Temporary covers shall be in place during all rain events, overnight, and during any extended period of time when the site will be left unattended, such as employee respite and hurricane evacuation.
- Any rainwater waste that does collect within the secondary containment structure must be removed immediately so that it does not reduce the capacity of the secondary container to hold fuels that may spilled within the unit.
- Any drainage valve provided to a secondary container must remain closed and locked at all times when not in use and should only be opened to drain a spill or rainwater waste.

Rainwater Waste:

- All rainwater waste must initially be handled as if it were polluted and must be assessed to determine if it is polluted.
- To be considered unpolluted, rainwater waste must not contain any visible pollution on the surface of the water such as oil sheen/oil slick.
- Rainwater waste should be drained in a controlled manner to a collection tanker in the case of polluted rainwater or to allow unpolluted rainwater waste to escape on fill containment pad which will be disposed of as hazardous waste upon demobilization from site.
- Only employees who have undergone training on this fuel spill prevention and control plan should be authorized to unlock and open the valve to rainwater waste.

2. Fuel Handling

Fuel spills on site can occur by various means during fuel handling including:

a. Lack of due care and attention when refueling or leaving the fuel pump unattended which can result in an overflow of fuel.

b. An increase in temperature can cause fuel to expand and overflow, if equipment is overfilled ("topped-off").

To minimize the likelihood of accidental fuel leak or spill on the construction site, general guidelines to be followed for safe practice in fuel usage include:

WHERE TO FUEL?

1. A staging area should be designated for equipment fuelling on-site.
2. Refuelling should be restricted to the designated area. There should be NO mobile fuelling of construction equipment around the site; equipment should be transported to the designated staging area.
3. Refuelling area may be constructed of concrete or fill material with a liner and berm.
4. This area should be located at least one hundred (100) feet away from coastline or wetland to prevent the runoff of spills.
5. Refuelling area should be fitted with fire extinguisher, spill kits and drip pans.
6. Refuelling safety instructions should be posted within the staging area.

HOW TO REFUEL?

1. Always concentrate on the task at hand. Never leave fuel tank unattended.
2. Do not overfill the fuel tank ("topping-off") to allow for fuel expansion on hot days.
3. Drip trays should be used as a secondary containment to catch fuel spill/leaks.

HOW TO PROPERLY MAINTAIN EQUIPMENT?

1. Equipment to be used on site should undergo a maintenance and preventative check prior to being dispatched to the island. Incoming equipment should be checked for leaking oil and fluids. Leaking vehicles or equipment should be serviced before being allowed to operate on-site.
2. Equipment Inspection should be included in site inspection by on site Environmental Officer and if necessary, repairs should be made immediately.
3. Equipment maintenance should be performed on the designated staging area on containment pad.
4. Preventative maintenance program should include oil change; inspection of hydraulic hoses and seals, oil and air filter replacements; and replacement of parts where needed.
5. A secondary containment, such as a drain pan or drop cloth, should be used to catch spills or leaks when removing or changing fluids.
6. Used fluids should be promptly transferred to the proper waste storage drums (labelled hazardous waste). Do not leave full drip pans or other open containers lying around.
7. Properly dispose of grease, oil, antifreeze, brake fluid, cleaning solutions, hydraulic fluid, batteries, transmission fluid, worn parts, filters, and rags in a designated bin labelled as "Hazardous Waste" and store on the containment pad until it is transported off island and disposed of in Snake Cay dumpsite.

8. Oil filters disposed of in trashcans or dumpsters can leak oil. Oil filters should be disposed of as hazardous waste and will be stored in a bin designated and label as such.
9. Used and damaged batteries should be stored in a secondary container labelled as "Used battery - Hazardous Waste" and store on the containment pad until it is transported off island and disposed of in Snake Cay dumpsite.

WHAT TO DO IF THERE IS A SPILL?

Despite all of the prevention methods in place, spills can happen. If a fuel spill occurs, the following actions should be taken:

1. **Classify:**

In the event of a spill, employees should be trained to quickly assess and identify the following:

- Type of fluid /spill?
- How much leaked, and how fast?
- What is the location and direction of the spill?
- Is the spill contained?
- Is it incidental or hazardous?

Occupational Safety and Health Administration (OSHA) defines an incidental release or spill as "a release of a hazardous substance which does not pose a significant safety or health hazard to employees in the immediate vicinity or to the worker cleaning it up, nor does it have the potential to become an emergency." Incidental spills may be cleaned up by employees and do not require an emergency response. Employees should know what they can and cannot cleanup in the case of a spill.

2. **Communicate:**

Notify the supervisor immediately. Then use signage and cones stored nearby to isolate the area so that others are aware of the spill and do not slip or fall. The supervisor should advise the Environmental Officer (EO) immediately. In the event of spills over 5 gallons, the EO should notify the Department of Environmental Health Services immediately via telephone, log the incident into the BESTPROTECT242 APP and contact the DEPP via telephone. An incident report should be provided by the contractor to the Environmental Manager (EM) within 48 hours of a spill and the EM should submit incident report in the bi-weekly (twice per month) report to DEPP.

3. **Control and Contain:**

Stop the spill at the source when safely possible. Turn off the pump, plug the leak or do what is needed to stop the amount of material being spilled from growing even larger. As the laydown area will be constructed with a fill base containment pad some types of spills such as fuel will quickly absorb into the

material. Other material such as oils may be controlled from spreading by using absorbent socks, mats or absorbent material in the spill kit.

4. **Clean-up and decontaminate**

Once the spill has be contained, personnel should put on spill clean-up PPE stored nearby and begin clean-up immediately using appropriate spill clean-up material which may include oil absorbents and/or a liquid pump. Used clean-up material should be placed in a fireproof container labelled as hazardous material and oil pumped into waste oil container. Contaminated soil should be excavated to a depth where the soil appears visually clean and back filled with clean material. Contaminated soils should be placed into an adequately sealed and secure container. Photographic evidence of the clean-up should be captured for reporting purposes. All containers should be properly labelled as hazardous waste. Hazardous waste should be stored on the containment pad until it is transported off island and disposed in Snake Cay dumpsite. A ticket should be provided as proof of disposal. Waste tickets can be cross referenced with pay applications for consistency. Personnel involved in the spill or responsible for clean-up should thoroughly wash the fuel from their body at the wash station provided nearby. Any clothing that has absorbed hydrocarbons should be removed and wash immediately.

5. **Critique**

Perform a root cause analysis and reassess control measures to prevent another spill of that nature. Document the details of the spill including cause, response and any actions to be taken as a result in a Spill Report which will be included in the bi-weekly environmental reporting for the project. A spill report template is provided in Appendix 2: Environmental Report Templates. Clean-up supplies should be replenished to ensure an adequate amount is on site at all times. A visual aid poster of the Spill Response Plan (see Figure 5.8-6) should be displayed in the fuel storage and refuelling area.

Figure 5.8-6: Spill Response Plan Poster

5.8.4.2 Hurricane Preparedness Plan

Introduction

The islands of The Bahamas lie in the hurricane belt and are subject to hurricanes and tropical storms during the hurricane season which is officially between 1 June to 30 November. Hurricanes can cause significant damage to the environment, property and human life. Actions and activity that are likely to amplify impacts during a hurricane should be managed to reduce or eliminate impact.

Purpose

The purpose of the Hurricane Preparedness Plan is to efficiently prepare for an approaching storm by identifying means to safely secure the project site during construction to minimize potential impacts. It serves as a guideline for contactors before, during and after the hurricane. The goal is to minimize loss of life, property and environmental damage which may result from a Hurricane.

Definitions

The following definitions relating to terminology associated with storms are listed on the National Oceanic and Atmospheric Administration (NOAA).

Advisory: *Officially information issued by tropical cyclone warning centers describing all tropical cyclone watches and warnings in effect along with details concerning tropical cyclone locations, intensity and movement, and precautions that should be taken. Advisories are also issued to describe: (a) tropical cyclones prior to issuance of watches and warnings and (b) subtropical cyclones.*

Center: *Generally speaking, the vertical axis of a tropical cyclone, usually defined by the location of minimum wind or minimum pressure. The cyclone center position can vary with altitude. In advisory products, refers to the center position at the surface.*

Direct Hit: *A close approach of a tropical cyclone to a particular location. For locations on the left-hand side of a tropical cyclone's track (looking in the direction of motion), a direct hit occurs when the cyclone passes to within a distance equal to the cyclone's radius of maximum wind. For locations on the right-hand side of the track, a direct hit occurs when the cyclone passes to within a distance equal to twice the radius of maximum wind. Compare indirect hit, strike.*

Eye: *The roughly circular area of comparatively light winds that encompasses the center of a severe tropical cyclone. The eye is either completely or partially surrounded by the eyewall cloud.*

Eyewall / Wall Cloud: *An organized band or ring of cumulonimbus clouds that surround the eye, or light-wind center of a tropical cyclone. Eyewall and wall cloud are used synonymously.*

Hurricane / Typhoon: *A tropical cyclone in which the maximum sustained surface wind (using the U.S. 1-minute average) is 64 kt (74 mph or 119 km/hr) or more. The term hurricane is used for Northern Hemisphere tropical cyclones east of the International Dateline to the Greenwich Meridian. The term typhoon is used for Pacific tropical cyclones north of the Equator west of the International Dateline.*

Hurricane Season: *The portion of the year having a relatively high incidence of hurricanes. The hurricane season in the Atlantic, Caribbean, and Gulf of Mexico runs from June 1 to November 30. The hurricane season in the Eastern Pacific basin runs from May 15 to November 30. The hurricane season in the Central Pacific basin runs from June 1 to November 30.*

Hurricane Warning: *An announcement that sustained winds of 64 knots (74 mph or 119 km/hr) or higher are expected somewhere within the specified area in association with a tropical, subtropical, or post-tropical cyclone. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the warning is issued 36 hours in advance of the anticipated onset of tropical-storm-force winds. The warning can remain in effect when dangerously high water or a combination of dangerously high water and waves continue, even though winds may be less than hurricane force.*

Hurricane Watch: *An announcement that sustained winds of 64 knots (74 mph or 119 km/hr) or higher are possible within the specified area in association with a tropical, subtropical, or post-tropical cyclone. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the hurricane watch is issued 48 hours in advance of the anticipated onset of tropical storm force winds.*

Indirect Hit: *Generally refers to locations that do not experience a direct hit from a tropical cyclone, but do experience hurricane force winds (either sustained or gusts) or tides of at least 4 feet above normal.*

Inundation: *The flooding of normally dry land, primarily caused by severe weather events along the coasts, estuaries, and adjoining rivers. These storms, which include hurricanes and nor'easters, bring strong winds and heavy rains. The winds drive large waves and storm surge on shore, and heavy rains raise rivers. (A tsunami — a giant wave caused by earthquakes or volcanic eruptions under the sea or landslides into the sea — is another kind of coastal inundation, but should not be confused with storm surge.)*

Landfall: *intersection of the surface center of a tropical cyclone with a coastline. Because the strongest winds in a tropical cyclone are not located precisely at the center, it is possible for a cyclone's strongest winds to be experienced over land even if landfall does not occur. Similarly, it is possible for a tropical cyclone to make landfall and have its strongest winds remain over the water. Compare direct hit, indirect hit, and strike.*

Major Hurricane: *A hurricane that is classified as Category 3 or higher.*

Maximum Sustained Surface Wind: *standard measure of a tropical cyclone's intensity. When the term is applied to a particular weather system, it refers to the highest one-minute average wind (at an elevation of 10 meters with an unobstructed exposure) associated with that weather system at a particular point in time.*

Maximum Sustained Surface Wind: *The standard measure of a tropical cyclone's intensity. When the term is applied to a particular weather system, it refers to the highest one-minute average wind (at an elevation of 10 meters with an unobstructed exposure) associated with that weather system at a particular point in time.*

Saffir-Simpson Hurricane Wind Scale: *The Saffir-Simpson Hurricane Wind Scale is a 1 to 5 categorization based on the hurricane's intensity at the indicated time. The scale provides examples of the type of damage*

and impacts in the United States associated with winds of the indicated intensity. The following table shows the scale broken down by winds.

Category	Wind Speed (mph)	Damage
1	74 - 95	Very dangerous winds will produce some damage
2	96 - 110	Extremely dangerous winds will cause extensive damage
3	111 - 129	Devastating damage will occur
4	130 - 156	Catastrophic damage will occur
5	> 156	Catastrophic damage will occur

Storm Surge: *An abnormal rise in sea level accompanying a hurricane or other intense storm, and whose height is the difference between the observed level of the sea surface and the level that would have occurred in the absence of the cyclone. Storm surge is usually estimated by subtracting the normal or astronomic high tide from the observed storm tide.*

Relevant Agencies

Department of Meteorology

Department of Meteorology is responsible for reporting and recording the weather and climate for The Bahamas.

Ministry of Disaster Preparedness, Management & Reconstruction

Ministry of Disaster Preparedness, Management & Reconstruction is mandated to focus efforts on disaster preparedness, response, relief and recovery; and coordination with NEMA and family island committees & administrators.

National Emergency Management Agency

The National Emergency Management Agency (NEMA) is a government agency operating under the authority of Cabinet Office that is mandated with Disaster Management in the Commonwealth of The Bahamas.

Bahamas Air Sea & Rescue Association

The Bahamas Air Sea Rescue Association (BASRA) is a non-profit organization dedicated to assisting seamen and airmen in distress in The Bahamas. The air pilots of the Nassau Flying Club, The Royal Bahamas Police Force (RBPF)and their radio room, the Royal Bahamas Defence Force (RBDF), Drug Enforcement Administration (DEA), Atlantic Undersea Test and Evaluation Cente (AUTEC), the United States Coast Guard (USCG), and a group of volunteers all help with air and boat searches and rescues. The agency is available 24 hours.

Priority Construction & Potential Impacts

Potential impacts from hurricane during the construction phase include:

- Fuel spills that introduce accelerants that can cause fires and result in habitat destruction and loss of wildlife.
- High waves and tides can damage docks, pilings and the boats attached to them and cause drowning.
- Boats damaged during storm can result in fuel spills that can cause damage to the marine environment.
- Fuel spills upland that reach the marine environment as a result of floods.
- Construction material and debris that can become airborne and end up as marine debris.
- Injury and or loss of life of personnel.

Management Strategy

1. Training

Potential impacts associated with hurricanes will be included in the site induction training to be administered to all personnel on site before commencement of any works. Training on implementation of the hurricane preparedness plan will be in the form of an emergency drill.

2. Preparedness Procedures

During hurricane season, the Project Manager (PM) will be responsible for checking weather reports on a daily basis. An Emergency contact list should be posted and easily accessible (See Table 5.8.1)

Table 5.8-1: Emergency Contact list

Agency	Phone Contact
Search & Rescue	
Bahamas Air Sea Rescue Association (BASRA)	242-325-8864
Royal Bahamas Defence Force (RBDF)	242-362-2926
Protection	
Marsh Harbour Police Station	242-367-2650
Weather Information	
Department of Meteorology	242-702-5250
National Emergency Management Agency (NEMA)	242-3226081 242-322-6085
Medical Support	
Marsh Harbour Clinic	242-367-2510 242-367-4594
Princess Margret Hospital (PMH)	242-322-2861
Doctors Hospital	242-302-4600
Medical Air Support Association (MASA)	242-351-5122

When an advisory has been issued indicating that there is a storm in the area, hurricane preparedness activities should commence 48 hours before the predicted time of impact. The following actions should be taken under the supervision of the PM and confirmed by the EM:

- All marina works should be suspended.
- All fuel storage, equipment, hazardous chemicals and portable toilets should be removed from the site.
- Used oil should be removed from the site and disposed of at NPEP dumpsite as hazardous material and a ticket provided as proof. Waste tickets will be cross referenced with pay applications for consistency.
- Trash cans should be emptied into dumpsters and dumpsters removed from site.
- Construction material that can become airborne and end up as marine debris or projectiles should be securely covered with tarp or removed from the site.
- All fill stockpiles should be placed more than one hundred feet from open water and silt fencing installed around the perimeter for wash out control during heavy rains.
- After the storm has passed and the "all clear" has been given, the following steps should be taken:
    - A team led by the project manager and environmental manager should be mobilized to the site to conduct an assessment to identify if there are any environmental or safety concerns resulting from the storm.
    - The EM should conduct a post storm assessment and report any incident of environmental concern to DEPP.
    - The EM should collaborate with DEPP on actions to be taken to mitigate incidents of environmental concern.
    - The EM should collaborate with the PM to execute actions to be taken to mitigate incidents of environmental concern.
    - Clean-up efforts should commence to remove any debris or harmful objects that might have been blown onto the site or became unsecured during the storm.
    - Debris from clean-up exercise shall be deposited to the Snake Cay land fill.
    - The site should be opened for construction activities to recommence when it is determined that it is safe.

5.8.4.3 Health & Safety Precautions and Response Plan

The appointed contractor will be required to submit a detail health and safety precautions and response plan as per their company's procedures. The plan should include but should not be limited to the following information:

1. Roles and Responsibilities

The Contractor should appoint a designated Site Safety Officer with an acting safety officer always appointed in his absence. Basic first aid training of these persons shall be required.

2. Best Management Practices

Some topics to be addressed include, best practices for working:

- With hazardous materials
- At heights
- In confined spaces
- With heavy equipment
- Use of fire extinguishers
- Use of spill kits

3. Personal protective equipment (PPE)

PPE shall be worn as appropriate for tasks undertaken (see PPE chart below). When working alongside or over water, where there is a risk of drowning, the Contractor should take appropriate measures to prevent falling (e.g. use of harnesses) and rescue equipment shall be readily on hand (e.g. use of life jackets, life lines/rings and a safety boat). At all times work sites should 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.

Table 5.8-2: Personal Protective Equipment Chart

PPE	Description	Illustration	Construction Activity
Safety Vest and Hi visibility clothing	Apparel designed to enhance visibility of workers on site. Use hi-vis colors like orange and yellow/lime and may also incorporate reflective tape used to ensure that you can be seen when you're in an environment with poor lighting and obstructed views	 	At all times, in all areas on site.
Hard Hat	A hard hat is a type of helmet predominantly used in workplace environments such as industrial or construction sites		Used to protect the head from injury due to falling objects, impact with other objects, debris, rain, and electric shock

PPE	Description	Illustration	Construction Activity
Steel toe shoes	A durable boot or shoe that has a protective reinforcement in the toe.		Protects the foot from falling objects or compression.
Goggles	Protective eyewear that usually enclose or protect the area surrounding the eye in order to prevent particulates, water or chemicals from striking the eyes		Offers protection from flying debris and particles like dust and saw dust
Gloves	Personal protective equipment worn during work projects that cover and protect the hands from the wrist to the fingers		To save the user's hands and fingers from unnecessary wounds such as cuts, blisters, splinters, skin punctures or heat and chemical burns
Dust mask	A dust mask is a flexible paper pad held over the nose and mouth by elastic or rubber straps		Personal comfort against non-toxic nuisance dusts.
Respirator	A mask or device worn over the mouth and nose		To protect the wearer from inhaling hazardous atmospheres, including fumes, vapours, gases and particulate matter.
Earmuffs	Earmuffs are objects designed to cover a person's ears for hearing protection		To protect staff from loud noises as a result of machinery and construction.
Welding helmet	Headgear made of metal with a tinted u/v lens to protect welder's eyes, face and neck from flash burn, ultraviolet light, sparks, infrared light, and heat.		Welding

PPE	Description	Illustration	Construction Activity
Life vest	A life vest (also called Personal flotation device, lifejacket, or cork jacket) is a special type of clothing. The vest makes people float in water.		Works near water
Harness	A safety harness is a form of protective equipment designed to protect a person, animal, or object from injury or damage. The harness is an attachment between a stationary and non-stationary object.		Works at heights.

4. General Requirements

- There should be a fully equipped First Aid Box at all work sites at all times.
- A list of local emergency telephone numbers should be posted in case of an accident.
- Minor and major accidents should be recorded in an accident logbook.
- Method Statements should include health and safety precautions.
- Works should be conducted as per method statements at all times.
- Health and safety considerations to be included in monitoring regime.

5. Safety precautions for working in a pandemic condition (Covid 19)

The following tasks are to be undertaken by the Contractor to ensure that there are no negative health impacts related to the COVID 19 Pandemic, during the construction works for the Project.

In addition to all the safety requirements already outlined, the Contractor will practice the following requirements to prevent any individual involved in the project and any member of the public from contracting or contributing to the spread of the COVID 19 virus.

1. Maintain a distance of six (6) feet between workers unless it is absolutely impossible for an individual to complete his assignment without help from other staff members (for instance when lifting heavy items).
2. Wear approved face mask at ALL times; disposable mask should be discarded at the end of each work shift; reusable cloth masks should be washed at the end of each workday.
3. Have on site an appropriate hand wash down station charged with chlorine or other disinfectant solution.

4. Body temperature should be measured every morning prior to starting work; in a case where temperature higher than 100°F is recorded, the employee should be instructed to abandon immediately the workplace and return home.
5. Workers should avoid touching their mouth, nose and eyes with unwashed hands.
6. Workers should cover mouth and nose when coughing or sneezing, or they should use the inside of their elbows, especially when other person might be close by (even if at a greater distance than 6 ft).
7. Workers should report to Project Manager any situation which might lead to any kind of connection to the COVID 19 virus (for instance if they accidentally come into contact with a person showing any of the infection symptoms).
8. Site supervisors should also be responsible for monitoring and ensuring compliance and report to Project Manager as appropriate.
9. Every episode of a potential contagion amongst staff should be immediately reported to local authorities.
10. Each piece of equipment should be operated by the same person; when a different person needs to operate a piece of equipment not assigned to himself, he shall wipe the wheel, door handle and all the controls prior to start operating that piece of equipment with disinfecting wipes.
11. Each laborer will be issued his own personal hand tools.
12. Disinfecting wipes will be available on site, and shared site facilities should be wiped prior to each use.
13. These COVID-19 preventative procedures and the COVID-19 hotline numbers listed below in figure 5.8-7 are to be visible to all staff and visitors upon entering the work site.

Figure 5.8-7: Covid 19 Hotline Numbers (Source: Ministry of Health)

5.8.4.4 Covid-19 Procedures

According to the World Health Organization (WHO), COVID-19 is now a pandemic, meaning a global outbreak of disease. On March 15th, 2020, the Prime Minister of The Bahamas declared the COVID-19 outbreak a national emergency. There are currently a number of individuals who have tested positive in The Bahamas for the virus that causes COVID-19. It is possible that it will continue spreading in the community ("community spread"). Community spread means people have been infected with the virus in an area, including some who are not sure how or where they became infected. There is much more to learn about the transmissibility, severity, and other features associated with COVID-19 as the outbreak investigation continues. Infected people can spread COVID-19 through their respiratory secretions, especially when they cough or sneeze. According to the CDC, spread from person-to-person is most likely among close contacts (6 feet). It is also possible that a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose, or their eyes.

Construction sites operating in Abaco and Grand Bahama during the Coronavirus Covid-19 pandemic need to ensure they are protecting their workforce and minimizing the risk of spread of infection.

This guidance is intended to introduce consistent measures on sites of all sizes in line with the Government's recommendations on social distancing.

These are exceptional circumstances and the industry must comply with the latest Government advice on Coronavirus at all times.

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

Sites should remind the workforce at every opportunity of the Site Operating Procedures which are aimed at protecting them, their colleagues, their families and the Bahamian population.

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

1.1 Self-Isolation

Anyone who meets one of the following criteria should not come to site:

- Has a fever (greater than or equal to 100.4) or a new, persistent cough - follow the guidance on self-isolation
- Is a vulnerable person (by virtue of their age of greater than 60, underlying health condition, clinical condition or are pregnant)
- Is living with someone in self-isolation.

1.2 Procedure if Someone Falls Ill

If a worker develops a fever or a persistent cough while at work, they should:

- Return home immediately

- Avoid touching anything
- Cough or sneeze preferably into the crook of their elbow or a tissue and put it in a bin and wash their hands.
- They must then follow the guidance on self-isolation and not return to work until their period of self-isolation has been completed.

1.3 Travel to Site

Wherever possible workers should travel to site alone using their own transport and sites need to consider:

- Parking arrangements for additional cars and bicycles
- Other means of transport to avoid public transport e.g. cycling
- Providing hand cleaning facilities at entrances and exits. This should be soap and water wherever possible or hand sanitiser (minimum 60% alcohol) if water is not available
- How someone taken ill would get home.

1.4 Site Access Points

- Stop all non-essential visitors
- When possible, introduce staggered start and finish times to reduce congestion and contact at all times
- Monitor site access points to enable social distancing – may need to change the number of access points, either increase to reduce congestion or decrease to enable monitoring
- Remove or disable entry systems that require skin contact e.g. fingerprint scanners
- Require all workers to wash or clean their hands before entering or leaving the site
- Allow plenty of space (six feet) between people waiting to enter site
- Regularly clean common contact surfaces in reception, office, access control and delivery areas, e.g. screens, telephone handsets, desks,
- Reduce the number of people in attendance at site meetings and consider holding them outdoors wherever possible
- Drivers should remain in their vehicles if the load will allow it and must wash or clean their hands before unloading goods and materials.

1.5 Hand Washing

- Provide additional hand washing facilities to the usual facilities if a large spread out site or significant numbers of personnel on site (minimum of one handwashing station / 6 workers on site)

- Ensure soap and fresh water is readily available and kept topped up at all times
- Provide hand sanitiser where hand washing facilities are unavailable
- Regularly clean the hand washing facilities and check soap and sanitiser levels
- Provide suitable and sufficient rubbish bins for hand towels with regular removal and disposal. Sites will need extra supplies of soap, hand sanitiser and paper towels and these should be securely stored.

1.6 Toilet Facilities

- Restrict the number of people using toilet facilities at any one time
- Wash hands before and after using the facilities
- Enhance the cleaning regimes for toilet facilities particularly door handles, locks and the toilet flush
- Portable toilets should be avoided wherever possible, but where in use these should be cleaned and emptied more frequently
- Provide suitable and sufficient rubbish bins for hand towels with regular removal and disposal.

1.7 Eating Arrangements

With restaurants having been closed except for take-out, many places will not be able to operate as normal. Also, in these exceptional circumstances and where it is not possible to introduce a means of keeping equipment clean between use, kettles, microwaves etc. must be removed from use.

The workforce should also be required to stay on site once they have entered it and not leave to go to foodstores.

- Dedicated eating areas should be identified on site to reduce food waste and contamination
- Break times should be staggered to reduce congestion and contact at all times
- Hand cleaning facilities or hand sanitiser should be available at the entrance of any area where people eat and should be used by workers when entering and leaving the area
- The workforce should be asked to bring pre-prepared meals and refillable drinking bottles from home
- Workers should sit 6 feet apart from each other whilst eating and avoid all contact
- Where catering is provided on site, it should provide pre-prepared and wrapped food only
- Payments should be taken by contactless card wherever possible
- Crockery, eating utensils, cups etc. should not be used
- Drinking water should be provided with enhanced cleaning measures of the tap mechanism introduced

- Tables should be cleaned between each use
- All rubbish should be put straight in the bin and not left for someone else to clear up
- All areas used for eating must be thoroughly cleaned at the end of each break and shift, including chairs, door handles, vending machines and payment devices.

1.8 Changing Facilities, Showers and Drying Rooms

- Introduce staggered start and finish times to reduce congestion and contact at all times
- Introduce enhanced cleaning of all facilities throughout the day and at the end of each day
- Consider increasing the number or size of facilities available on site if possible
- Based on the size of each facility, determine how many people can use it at any one time to maintain a distance of six feet
- Provide suitable and sufficient rubbish bins in these areas with regular removal and disposal.

1.9 Avoiding Close Working

In construction there are situations where it is not possible or safe for workers to distance themselves from each other by 6 feet.

General Principles

- Non-essential physical work that requires close contact should not be carried out
- Work requiring skin to skin contact should not be carried out
- Plan all other work to minimise contact between workers
- Re-usable PPE should be thoroughly cleaned after use and not shared between workers
- Single use PPE should be disposed of so that it cannot be reused
- Stairs should be used in preference to lifts or hoists
- Where lifts or hoists must be used:
- Lower their capacity to reduce congestion and contact at all times
- Regularly clean touchpoints, doors, buttons etc.
- Increase ventilation in enclosed spaces
- Regularly clean the inside of vehicle cabs and between use by different operators.

Site Meetings

- Only absolutely necessary meeting participants should attend
- Attendees should be six feet apart from each other
- Rooms should be well ventilated / windows opened to allow fresh air circulation

- Consider holding meetings in open areas where possible.

1.10 Cleaning

Enhanced cleaning procedures should be in place across the site, particularly in communal areas and at touch points including:

- Taps and washing facilities
- Toilet flush and seats
- Door handles and push plates
- Hand rails on staircases and corridors
- Lift and hoist controls
- Machinery and equipment controls
- Food preparation and eating surfaces
- Telephone equipment
- Key boards, photocopiers and other office equipment
- Rubbish collection and storage points should be increased and emptied regularly throughout and at the end of each day.

[1] Source: Based on BuildUK's "Site Operating Procedures –Protecting Your Workforce" downloaded from https://builduk.org/wp-content/uploads/2020/03/Site-Operating-Procedures-23-March-2020.pdf 24th March, 2020

STAKEHOLDER ENGAGEMENT PLAN

5.9 Stakeholder Engagement Plan

5.9.1 Introduction

Stakeholder Engagement is an integral component of informed decision-making and responsible development. The Montage Cay Project Stakeholder Engagement Plan (SEP) has been developed to facilitate and manage engagement during construction and operations and serves as a guide for the developer and the contractor during the construction phase.

5.9.2 Purpose & Scope

The purpose of this plan is to define the project approach to consultation and disclosure. Specifically, this plan aims to:

- Meet the regulatory requirements for obtaining a certificate of environment clearance
- Identify key stakeholders that are affected and or influence the project
- Identify the most effective methods to disseminate project information
- Ensure regular, accessible, transparent and appropriate consultation
- Provide opportunities to effectively engage all stakeholders to voice their opinions and concerns of the project
- Build mutually respectful, beneficial and lasting relationships with stakeholders
- Create an atmosphere of understanding
- Establish formal grievance/resolution mechanisms
- Define roles and responsibilities for the implementation of the SEP
- Define reporting and monitoring measures
- Improve and facilitate decision making

5.9.3 Stakeholder Identification

Stakeholders are persons or groups who are directly or indirectly affected by the project, as well as those who may have interests in the project and/or the ability to influence its outcome, either positively or negatively.

Internal Stakeholders

An Internal stakeholder is any person within the organizational structure of a business or a project. Internal stakeholders for the Montage Cay Project include construction employees.

External Stakeholders

External Stakeholders are individuals, groups or business that are impacted by the company or project but does not contribute to the internal operations. Key External Stakeholders for the project include:

Government Agencies

This group includes Government Ministries and Departments that are responsible for approvals and permits required for the project to progress. The government departments that will be consulted include:

- Local Government
- Ministry of Works
- Ministry of Environment, Department of Environment Planning and Protection
- Ministry of Environment, Department of Environmental Health
- Ministry of Agriculture and Marine Resources, Department of Agriculture
- Water & Sewerage Corporation

Non-governmental Organizations (NGO)

This group includes NGO and Conservation organizations which may wish to review the environmental documentation and or comment on environmental matter of concern. NGOs which may have interest in the project include but are not limited to:

- Friends of the Environment
- Bahamas National Trust (BNT)

A comprehensive stakeholder contact list should be developed and maintained through the life of the project.

5.9.4 Methods of Engagement

There are a variety of engagement techniques used to build relationships with stakeholders, gather information from stakeholders, consult with stakeholders, and disseminate project information to stakeholders. A list of common consultation techniques and the most appropriate application of these techniques are provided in Table 5.9-1. Consultation Techniques to be used for specific stakeholder groups are outlined in Table 5.9-2.

The following criteria should be taken into consideration in determining the appropriate and most effective form of communication to be used for a stakeholder:

- The proximity of the stakeholder to the project
- The number of persons impacted
- The degree of impact (positive or negative)
- The magnitude of impact (how significant the impact is)
- The extent of influence of the stakeholder on the project

- The purpose of for engagement
- The audience to be addressed

Table 5.9-1: Consultation techniques and appropriate application

ENGAGEMENT TECHNIQUE	MOST APPROPRIATE APPLICATION OF TECHNIQUE
phone/ email/Text/ WhatsApp messaging	• Distribute project information to government officials, organizations, agencies and companies • Invite stakeholders to meetings
Print media and radio announcements	• Disseminate project information to large audiences, and illiterate stakeholders • Inform stakeholders about consultation meetings • Advertise jobs
One-on-one interviews	• Solicit views and opinions • Enable stakeholders to speak freely and confidentially about controversial and sensitive issues • Build personal relations with stakeholders • Address grievances
Formal meetings	• Present project information to a group of stakeholders • Allow the group of stakeholders to provide their views and opinions • Build impersonal relations with high level stakeholders • Distribute technical documents • Facilitate meetings using PowerPoint presentations • Record discussions, comments/questions raised and responses
Public meetings	• Present project information to a large audience of stakeholders, • Allow the group of stakeholders to provide their views and opinions • Distribute non-technical project information • Facilitate meetings using PowerPoint presentations, posters, models, videos and pamphlets or project information documents • Record discussions, comments/questions raised and responses
Surveys	• Gather opinions and views from individual stakeholders • Gather baseline data • Use WhatsApp to distribute survey • Use Survey Monkey to analyze responses • Develop a baseline database for monitoring impacts

Table 5.9-2: Stakeholder group consultation methods

STAKEHOLDER GROUP	CONSULTATION METHODS
Government officials	• Phone / email • One-on-one interviews • Formal meetings
Neighboring communities and businesses	• Print media, radio announcements, WhatsApp messages • Public meetings • Focus group meetings • Surveys • Information Centre • Poster/Signage
NGO's and conservation organizations	• Phone / fax / email / text messaging • One-on-one interviews • Focus group meetings • Information Centre

A website should be set up to disseminate information and receive feedback on the project. Key pages should include:

- **Home**
- **About:** Provide Background information on the project and project proponents
- **Documents:** provide link to download project documents such as EIA and EMP
- **Feedback:** Provide the opportunity for the public to post comments and or questions on the project
- **Contact Us:** Provide addition methods for communication

5.9.5 Grievance Mechanism

A grievance is a concern or complaint raised by an individual or group affected by the project's activities. Grievances do not include a question or suggestion on the company or project or request for assistance.

The Objectives of this grievance mechanism are:

- to provide stakeholders with a clear process for providing comment and raising grievances;
- to allow stakeholders the opportunity to raise comments/concerns anonymously;
- to structure and manage the handling of comments, responses and grievances, and allow monitoring of effectiveness of the mechanism; and
- to ensure that comments, responses and grievances are handled in a fair and transparent manner, in line with the Owner's internal policies, and international best practice.

Roles and Responsibilities

The project will appoint a communications liaison officer that will be responsible for receiving and handling comment responses and grievances. This person will coordinate the investigation and response to grievances as well as on-going monitoring and review of the effectiveness and efficiency of the grievance process.

Procedure for Comment Response and Grievances

The steps taken by the project for receiving and handling any comments pertaining to the Project are outlined below:

STEP 1: Submitting a comment to the project:

A comment can be submitted to the project by any of the following ways:

- During regular meetings held between stakeholder and project representatives;
- During informal meetings with project representatives;
- Through communication directly with management – for example a letter addressed to site management, or other operational offices;
- Directly by e-mail
- Via website link
- Through the designated liaison.

For comments that have been submitted informally, the liaison will arrange for a meeting where the comment can be explained in full and written down on a grievance and comment logging form (See Appendix 2 for grievance form). For all comments the liaison will be the main point of contact, responsible for responding to the commenter.

STEP 2: Logging the comment/grievance

Once a comment/grievance has been received it must be logged in the comments and concerns register.

STEP 3: Providing the initial response

The stakeholder that lodged the initial comment will then be contacted within 7 days to acknowledge that the project has logged the comment or grievance and provide feedback on how the matter has been or will be addressed.

STEP 4: Investigating a grievance

If a comment or grievance requires further investigation, the project will aim to complete investigation within two weeks of the grievance first being logged.

Depending on the nature of the grievance, the approach and personnel involved in the investigation will vary. A complex problem may involve external experts for example. A simpler case may be easier, and

quicker to investigate. The project will involve the aggrieved in this investigation, where possible, to ensure participation.

The liaison will continually update the aggrieved on the progress of the investigation and the timeline for conclusion.

STEP 5: Concluding/resolving the grievance

The grievance should then be concluded. The project will outline the steps taken to ensure that the grievance does not reoccur. If grievance has been satisfied, then senior management should be included on the response.

If, however, the grievance still stands the liaison will initiate further investigation and determine the seps for further action. The liaison will continue update the commenter and seek to find a satisfactory resolution.

Record Keeping

All comment responses and grievances are to be logged using the Comment Response and Grievance logging forms and registers. This includes details of the comments/grievance, the commenter/aggrieved, the steps taken to resolve the grievance and reference to any accompanying documentation e.g. written statements, photographic evidence, or investigation report.

5.9.6 DOCUMENTATION

To ensure that an accurate and detailed record of information and views are gathered at formal meetings, minutes will be recorded.

All activities associated with the stakeholder engagement process will be recorded and tracked in a stakeholder engagement log to be maintained by the project's communications liaison officer. The stakeholder engagement log shall record all stakeholders, contact details, dates of engagement with comments and include follow up requirements.

Additionally, the Project's Environmental Manager will capture stakeholder engagements in the project's environmental reporting to be submitted to the Department of Environmental Planning & Protection on a bi-weekly basis.

The SEP is a living document that will be refined and modified throughout the life of the project and should be updated as needed.

Information derived from stakeholder feedback should be taken into consideration in construction design, methodology and operational management.

6 CONCLUSION

This document outlines Best Management Practices to be used as a guideline during construction to ensure that impacts identified are addressed to eliminate, minimize or mitigate the effect.

Implementation of this plan as it is presented including the key roles are essential to effective management of potential impacts.

This EMP is a living document and will be updated throughout the life of the construction phase to reflect any changes or new information that might arise.

STACY A. R. LUBIN, MSc.
Lakeview Road, Nassau, Bahamas; Phone: 242-376-2334; Email: stacylubin@gmail.com

PERSONAL SUMMARY

- Goal-oriented professional with proven capabilities in technical analysis, team management and project management
- Confident public speaker
- Skilled at multi-tasking with strong analytical skills
- Able to find solutions for tough situations
- Practical knowledge of organizing and planning activities for teams
- Able to work alone or as part of a team
- Quick Learner
- Accomplished negotiator
- Proficient in all major operating systems - Microsoft and Apple based, Microsoft Office Suite

PROFESSIONAL EXPERIENCE

Sterling Global (Hurricane Hole Marina)
Project Manager- Environment and Operations **July 2020-Present**

Baha Mar Development Office **April 2018- June 2020**
Project Coordinator

The Bahamas Environment, Science, and Technology
(BEST) Commission **February 2006-April 2018**
Senior Environmental Officer

PROJECT MANAGEMENT

Sterling Hurricane Hole- Project manager with responsibility for:

- Management of special projects.
- Assists with maintenance and property management.
- Serves as part of the Operations Management team to assist with start up and operations.

BEST Commission - Consultant to the Bahamas Environment Science and Technology (BEST) Commission for the Fifth National Report (5NR) to The United Nations Convention on Biological Diversity (CBD). Contracted to produce the 5NR on behalf of the BEST Commission for submission to CBD:

- Collect data and information needed through literature review, interviews, meetings and a validation for reporting obligations to the CBD.
- Facilitate stakeholder consultations to meet reporting requirements.
- Draft the 5NR while following the guidelines set by the CBD.

BahMar - Assisted the Development and Construction staff with various projects throughout the Baha Mar development.

- Performed Environmental Monitoring and Oversight for the development/construction of the Baha Mar Bay Water Park Facilities.
- Managed the Oil Remediation Project for the Old Radisson Laundry Facility; ensuring the project runs within the schedule and budget and that the contractor meets all deliverables satisfactorily.
- Assisted team members with tasks related to the construction of the Baha Mar Waterpark or various maintenance projects throughout the properties.
- Logged project progress and maintains timelines for ongoing development.
- Performed in-field oversight for ongoing development.

BEST Commission - Lead technical officer for The Government charged with assisting National Project coordinators for projects such as the Global Environment Facility (GEF) $9.6M Project on Expanding Marine Protected Areas. The GEF serves as the main funding body for global environmental projects. Duties were as follows:

- Supported the implementation of various environmental projects.

- Acted as government liaison to the project coordinator, coordinating resources to achieve project deliverables. Primary stakeholder contact.
- Ensured project activities meet projected outputs and requirements.
- Facilitated success of the project by fostering completion of scope of works.
- Addressed gaps in implementation and identify solutions.

DEVELOPMENT PROJECTS

Sterling Hurricane Hole- Project manager for Sterling Hurricane Marina responsible for environmental compliance. Duties include, but are not limited to:

- Ensure compliance with all environmental laws, as well as Environmental Management Plans (EMPs) through monitoring.
- Environmental lead and liaison with the Government of The Bahamas, as well as non-governmental agencies and other stakeholders.
- Identify risk and develop mitigation strategies to minimize negative environmental issues.

BEST Commission - Project lead for various development projects throughout The Bahamas such as Baker's Bay, North Abaco Port Project, Coco Cay Island and Schooner Bay. Duties:

- Conducted site visits to assess areas where development was proposed.
- Reviewed Environmental Impact Assessments (EIA) and Environmental Management Plans (EMP).
- Monitored developments during construction phase.
- Provided oversight of compliance of EIAs and EMPs and all Environmental Laws.
- Liaised with Government and Non-Government Agencies.

CONSERVATION PROJECTS

BEST Commission- Project officer for a number national and regional conservation projects including, but not limited to:

- Mitigating the Threat of Invasive Alien Species in The Insular Caribbean (MTIASIC)
- Regional Project for Implementing National Biosafety Frameworks in The Caribbean.
- Disney's Reversing the Decline of Bahamian Coral Reefs
- Bahamas project on Access and Benefit Sharing and the United Nations Nagoya Protocol
- Member of various committees

PROJECT OFFICE MANAGEMENT

BahaMar

- Project management of schedules and meetings within the Development Office.
- Assisted the Director of Development in any tasks required.
- Responsible for ensuring all development team members are adequately equipped to supervise their projects.
- Responsible for the procurement function for the office.

BEST Commission

- Supervised the BEST Commission office in the absence of the Director
- Represented the BEST Commission in the absence of the Director
- Delegated technical officer(s) tasks as necessary
- Ensured the efficiency of daily tasks of The Commission
- Reported to the Permanent Secretary
- Administered technical advice to Government Agencies and the public.

EDUCATION AND TRAINING
Education

- Masters of Science (MSc.) in Sustainable Environmental Management, *Middlesex University*, 2003
- Bachelor of Science (BSc.) hons in Marine Biology and Coastal Ecology, *University of Plymouth*, 2002

Technical Training Received

- Licensed Class B Boat Captain
- Reefcheck-underwater survey methodology
- AGGRA- Atlantic and Gulf Rapid Reef Assessment

- Quickbooks
- GPS/GIS Training and ESRI Certification
- Qualified Scuba Diver
- Project Management

REFERENCES

- Stacey Moultrie- Managing Director, SEV Consultancy/ HDWells
- Philip Simon- President, New Providence Development Company
- Nadia Stubbs- Human Resources Director Scotia Bank

MONTAGE CAY PROJECT

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 indicated on 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 and Turbidity Monitoring Reports. Attach copies of reports as an appendix to 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 address specific 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 to this 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.

MONTAGE CAY PROJECT
NONCONFORMANCE REPORT FORM

SECTION 1: COMPLETED BY THE ENVIRONMENTAL MANAGER

NCR No.
Contractor:
Activity:
Non-Compliance: ☐ **Environment** ☐ **Health & Safety**
Details:

Details of Nonconformance observation
(attach photos on separate page)

Specific:

☐ Site Safety
☐ Groundwater Management
☐ Sediment control
☐ 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:

MONTAGE CAY PROJECT
INCIDENT REPORT FORM

Date of Incident

Time of Incident

TYPE OF INCIDENT

Waste Management	Excessive air emmission	Sediment	Excessive vegetation clearing or damage
Sanitary Spill	Excessive Noise	Flood	Protected vegetation damage
Other	Excessive Odor	Fire	Fauna Injury

Details of Incident

Response to Incident

Measures to prevent reoccurance

Name:

Position:

Signature:

Date:

MONTAGE CAY PROJECT
SPILL REPORT FORM

Project	**Location**
Date of Incident	**Time of Incident**
Name & Title of Observer	
Agency Notified	
Type of Material Spill	**Quantity Spilled**

Details of spill

Response to Spill

Measures to prevent reoccurance

Name:	Position:
Signature:	Date:

TURBIDITY MONITORING REPORT

Parameter	Background Sample	Compliance Sample
Location (Station ID, as approved by Commission)		
Weather		
Conditions (e.g., clear, rainy, cloudy, overcast, etc.)		
Air Temperature (°F)		
Wind Speed (mph)		
Wind Direction		
Sea Conditions		
Tidal Stage (e.g., high, low, incoming, outgoing, slack, etc.)		
Wave Height (ft)		
Turbidity (Depth of Sample to be taken at 1-ft below water surface)		
Time at Sample Analysis		
Instrument Calibration		
Turbidity (NTU) First Reading		
Difference (= Compliance – Background)		
Time at Sample Analysis		
Instrument Calibration		
Turbidity (NTU) Second Reading		
Difference (= Compliance – Background)		
Average Difference		

STERLING GLOBAL FINANCIAL

MONTAGE CAY PROJECT
ENVIRONMENTAL MONITORING CHECKLIST

Site description		Weather Conditions	
Location		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 freshwater drinking available?				
2	Waste Management				
a	Is good housekeeping practiced on site?				
b	Are appropriate storage containers being used and properly labelled?				
c	Are litter bins conveniently placed throughout the site?				
d	Is waste collection needed?				
e	Is hazardous waste separated in laydown area?				
f	Is spill response equipment on site and easily accessible?				
g	Are there solid waste records for disposal availible?				
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 refueling 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 appropriate, 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?				
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 refueling operations a minimum of 100 feet from any excavations with exposed groundwater?				
6	Portable Potties			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	YES	NO		
a	Is silt fencing adequately placed, properly installed and maintained?				
b	Is there any oil or grease observed?				
c	Are there poor water quality indicators, i.e. algae growth, dead marine life?				
d	Is fuel and oil storage, a minimum of 100 feet from waterbody?				
e	Is refueling operations a minimum of 100 feet from waterbody?				
f	Is there any plastic or other solid waste in water?				
8	Vegetation			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 buildup of dust on vegetation?				
e	Is there any overclearing of vegetation intended to be retained?				
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.		Signature: Date:			

Montage Cay Project
Stakeholder Consultation Form – Businesses

Date:	Time:
Interviewer(s):	

SECTION I: INTERVIEWEE PERSONAL INFORMATION

1. Name: 2. Age:
3. Relationship to the Project: 4. Gender:

SECTION II: HHM PROJECT KNOWLEDGE

1. Have you heard of the Montage Cay Project? If yes, how did you learn of the project?

2. What have you heard about the Project?

3. Did you receive a pamphlet on the project during this interview?

SECTION III: SECTOR VIEWS

1. What type of business do you operate?

2. How do you see the project benefiting your sector?

SECTION V: CONTACT OPTIONS

How do you prefer to find out information on the project?

☐ Social Media ☐ WhatsApp ☐ Email ☐ TV ☐ Radio ☐ Community Meetings

Montage Cay Project
Stakeholder Consultation Form - Complaints

Name of Person Making Complaint:

DETAILS OF COMPLAINT

State: What happened? When did it happen? Who did it happen to? What is the result of the problem? Source and duration of the problem.

DATE OF INCIDENT / GREVIENCE

☐ One-time incident/grievance (date _____)
☐ Happened more than once (how many times? _____)
☐ On-going (currently experiencing problem)

Signature: _____ Date: _____

Please return this form to:

Nadia Riley
nriley@sterlinggloballtd.com
Direct: 1-242-603-1936

Sterling Global Financial Limited
1-242-677-1900
PO Box N1812, 81 East Bay Street Nassau, Bahamas
http://www.sterlinggloballtd.com