



Integrated Solid Waste Management System for the Cayman Islands

Non-Technical Summary

ReGen and Cayman Islands Government

18 August 2023

→ The Power of Commitment

Contents

1.	What is the Integrated Solid Waste Management System for the Cayman Islands?	1
1.1	Who is making the application?	1
1.2	Why is an Integrated Solid Waste Management System proposed?	2
2.	What is an Environmental Impact Assessment?	2
2.1.1	Environmental Impact Assessment timeline for ISWMS project	3
3.	What is being proposed?	3
3.1	Proposed facilities	3
3.2	About the Energy Recovery Facility	7
3.3	Design and construction	8
3.4	Community sustainability	8
4.	Summary of effects and mitigation	9
4.1	Marine ecology	9
4.1.1	Baseline data and existing environment	11
4.1.2	Impacts	11
4.2	Terrestrial ecology	12
4.2.1	Baseline data and existing environment	12
4.2.2	Impacts	14
4.3	Hydrology and hydrogeology	14
4.3.1	Baseline data and existing environment	14
4.3.2	Impacts	15
4.4	Land quality	15
4.4.1	Baseline conditions and existing environment	16
4.4.1.1	George Town Landfill	16
4.4.1.2	Soil and gas baseline data	17
4.4.2	Impacts	18
4.5	Landscape and visual	18
4.5.1	Baseline data and existing landscape and visual environment	19
4.5.2	Impacts	20
4.6	Air quality and greenhouse gases emissions	22
4.6.1	Baseline data and existing environment	22
4.6.2	Impacts	22
4.7	Noise and vibration	24
4.7.1	Baseline data and existing environment	24
4.7.2	Impacts	25
4.8	Traffic and transport	26
4.8.1	Baseline conditions and existing traffic volumes	28
4.8.2	Impacts and effects	28
4.9	Socio-economics	28
4.9.1	Baseline data and existing environment	29
4.9.2	Impacts and effects	29

4.10	Cumulative effects	30
4.10.1	Inter-project effects	30
4.10.2	Inter-related effects	30
5.	Stakeholder consultation	30
5.1.1	Communications	31
5.1.2	Public consultation	31

Figure index

Figure 3.1	ISWMS Site Location	5
Figure 3.2	ISWMS Facilities	6
Figure 4.1	Marine Ecology Study Area	10
Figure 4.2	Terrestrial Ecology Existing Conditions	13
Figure 4.3	Boundary and Layout of the George Town Landfill	17
Figure 4.4	Three Viewpoints Showing an Artist's Rendering of the ISWMS	21
Figure 4.5	Air Quality Key Sensitive Receptors	23
Figure 4.6	Noise Sensitive Receptor Locations	25
Figure 4.7	Study Area Location Plan Showing Existing Road Network	27

1. What is the Integrated Solid Waste Management System for the Cayman Islands?

The Integrated Solid Waste Management System (ISWMS) for the Cayman Islands is a proposed development made up of multiple facilities and infrastructure to address several modern challenges around waste management, including:

- A rapid reduction in waste disposal capacity at the current George Town Landfill, which has grown to be the primary solid waste management site for Grand Cayman and is supported by aging and often non-functional plant, equipment and infrastructure.
- Growing pressures on waste management, treatment and disposal services, caused by increased waste volumes from a growing population and expanded development in the Cayman Islands.
- The need to develop new "energy from waste" recovery facilities.
- The continued use of non-engineered landfills in George Town, Cayman Brac and Little Cayman, which is inconsistent with sustainable best practices.

The proposed management system will:

- Replace the existing George Town Landfill and associated aging waste infrastructure with modern facilities that reflect best practices around waste management, treatment, and disposal.
- Include the construction of an Energy Recovery Facility and supporting waste processing, treatment, and disposal facilities.
- Allow the existing landfills in George Town, Cayman Brac and Little Cayman to be closed and remediated.

1.1 Who is making the application?

The proponent making the application for the ISWMS is the Dart Consortium, in collaboration with ReGen (a collaborative organization representing the new energy recovery and recycling facilities that form the ISWMS), the Cayman Islands Government and its respective consultants. A special purpose vehicle (or subsidiary) is planned to be established, with Waste Solutions Cayman Ltd. as the legal entity.

As part of the application, an Environmental Statement has been prepared, which summarizes the findings of the Environmental Impact Assessment, which has been undertaken by experts in a wide range of disciplines. This statement helps decision makers understand and make informed decisions regarding environmental implications.

This document forms the Non-Technical Summary of the Environmental Statement for the ISWMS for the Cayman Islands Project.

1.2 Why is an Integrated Solid Waste Management System proposed?

The ISWMS has been proposed following the development of the Cayman Islands Government's National Solid Waste Management Policy and National Solid Waste Management Strategy, which guides decision-making for solid waste management over the next 50 years. The Strategy outlines the key elements of the waste management hierarchy in decreasing order of importance:

1. Reduce (or 'Prevent')
2. Reuse
3. Recycle
4. Recover
5. Dispose



The business case for the ISWMS is based on strategic, economic, commercial, management and financial considerations. The ISWMS project is an economically viable and environmentally sustainable solution to the issues and challenges described.

In summary, the effort to develop the ISWMS is driven by a recognition that the existing solid waste management regime is not sustainable, poses a potential threat to the environment, and does not make best use of potential resources that could benefit the Cayman Islands. The continued use of aging, non-engineered and increasingly full landfills on each of the islands does not align with modern and sustainable waste management best practices and does not meet the solid waste disposal and processing needs of the National Solid Waste Management Strategy.

2. What is an Environmental Impact Assessment?

An Environmental Impact Assessment identifies how people and environmental resources could be affected by a proposed project, and puts forward measures that will avoid, offset, or minimize any negative effects. It acts as a mechanism to safeguard the environment and people from development actions which may cause harm or danger. There are five main stages of a typical Environmental Impact Assessment process.

Because of the ISWMS's proposed strategic, economic, commercial, management and financial benefits, and because it was developed following the Cayman Islands Government's National Solid Waste Management Policy and National Solid Waste Management Strategy, the Dart Consortium proceeded to the process's Scoping step.

1. **Screening** – Determine whether a project falls within applicable regulation, if it is likely to have a significant effect on the environment, and if it requires an assessment.
2. **Scoping** – Determine the extent of issues considered in the assessment.
3. **Preparing an Environmental Statement** – Where an assessment is needed, the project's applicant must prepare and submit an Environmental Statement to the local planning authority. The Statement must include the information required to assess the likely significant environmental effects of the development.
4. **Making a planning application and consultation** – The Environmental Statement is publicized online and through public notice. The consultation's stakeholders and public are given an opportunity to share their views on the proposed development and Environmental Statement.

5. **Decision making** – The Environmental Statement and any comments are taken into account by the authorizing entity when deciding whether or not to grant consent for the development. The public is informed of the decision and the supporting reasons.

2.1.1 Environmental Impact Assessment timeline for ISWMS project



3. What is being proposed?

To divert waste away from landfills and better reuse and recycle the items that waste producers currently throw away, the ISWMS Project proposes to close the George Town Landfill site and build state-of-the-art infrastructure immediately south-west of the existing landfill. When finished, this infrastructure will improve recycling and turn materials that aren't recycled into electricity to power homes and businesses.

3.1 Proposed facilities

The ISWMS is made up of several facilities proposed to be located immediately southwest of the existing George Town Landfill Site, as well as 'satellite' waste infrastructure to be developed on the two Sister Islands of Cayman Brac and Little Cayman. While some facilities require an Environmental Impact Assessment, some smaller elements of the project do not, on their own, require the same assessment. However, the Environmental Impact Assessment considers the cumulative effects of all aspects of the ISWMS, as they operate in combination with each other. The Environmental Impact Assessment excludes an assessment of the proposed facilities in Cayman Brac and Little Cayman. Transport of material from the Sister Islands to the Port is described and reviewed in the Environmental Impact Assessment.

Adjacent to the George Town Landfill site (Grand Cayman)

- An Energy Recovery Facility
- Non-energy recovery waste management facilities, including:
 - Site weighbridges (excluded from the Environmental Impact Assessment), where vehicles are weighed for tracking.
 - A green waste processing facility to process yard waste and store the resulting compost and mulch products.
 - A construction and demolition waste processing facility that recycles, recovers and diverts waste materials.
 - A bottom ash processing facility to process bottom ash from the Energy Recovery Facility into a recovered aggregate.
 - An abandoned and end of life/scrap metal processing facility to recycle, recover and divert vehicles that have been abandoned or surpassed their useful life.

- A medical waste facility to receive, store and process medical waste not suitable for treatment at the Energy Recovery Facility.
- A materials recycling facility (excluded from the Environmental Impact Assessment) to divert and recover dry mixed recyclables in Grand Cayman and the Sister Islands.
- A household waste recycling centre (excluded from the Environmental Impact Assessment), established as the public's central drop-off point for recyclable/non-recyclable household waste, including household hazardous waste.
- A landfill gas facility to allow for the capture and destruction of landfill gas from the North Mound of the George Town Landfill.
- A residual waste landfill to receive non-hazardous, non-recoverable and/or residual waste coming from ReGen's operations.
- Supporting facilities (excluded from the Environmental Impact Assessment), including:
 - An administrative building to accommodate staff and visitor groups and provide space for meetings, educational displays, an eating area, and associated washrooms.
 - A maintenance building to store plant equipment and carry out general maintenance of equipment associated with ISWMS operations.
 - A Caribbean Utilities Company substation to connect to the electricity grid.

At Cayman Brac

- Infrastructure for composting, recycling, end of life vehicle processing and waste transfer.

At Little Cayman

- Infrastructure for recycling, end of life vehicle processing and waste transfer.

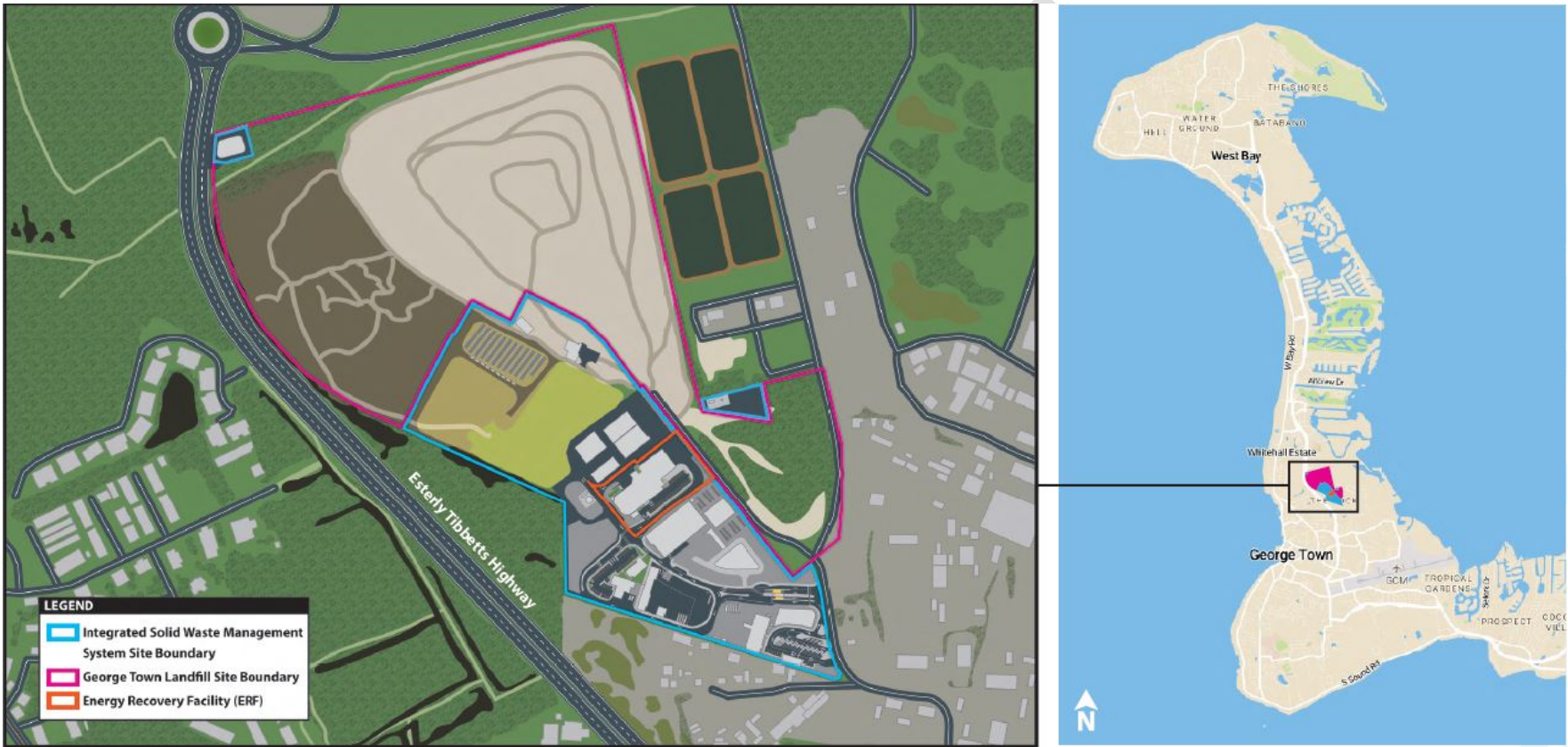


Figure 3.1 ISWMS Site Location

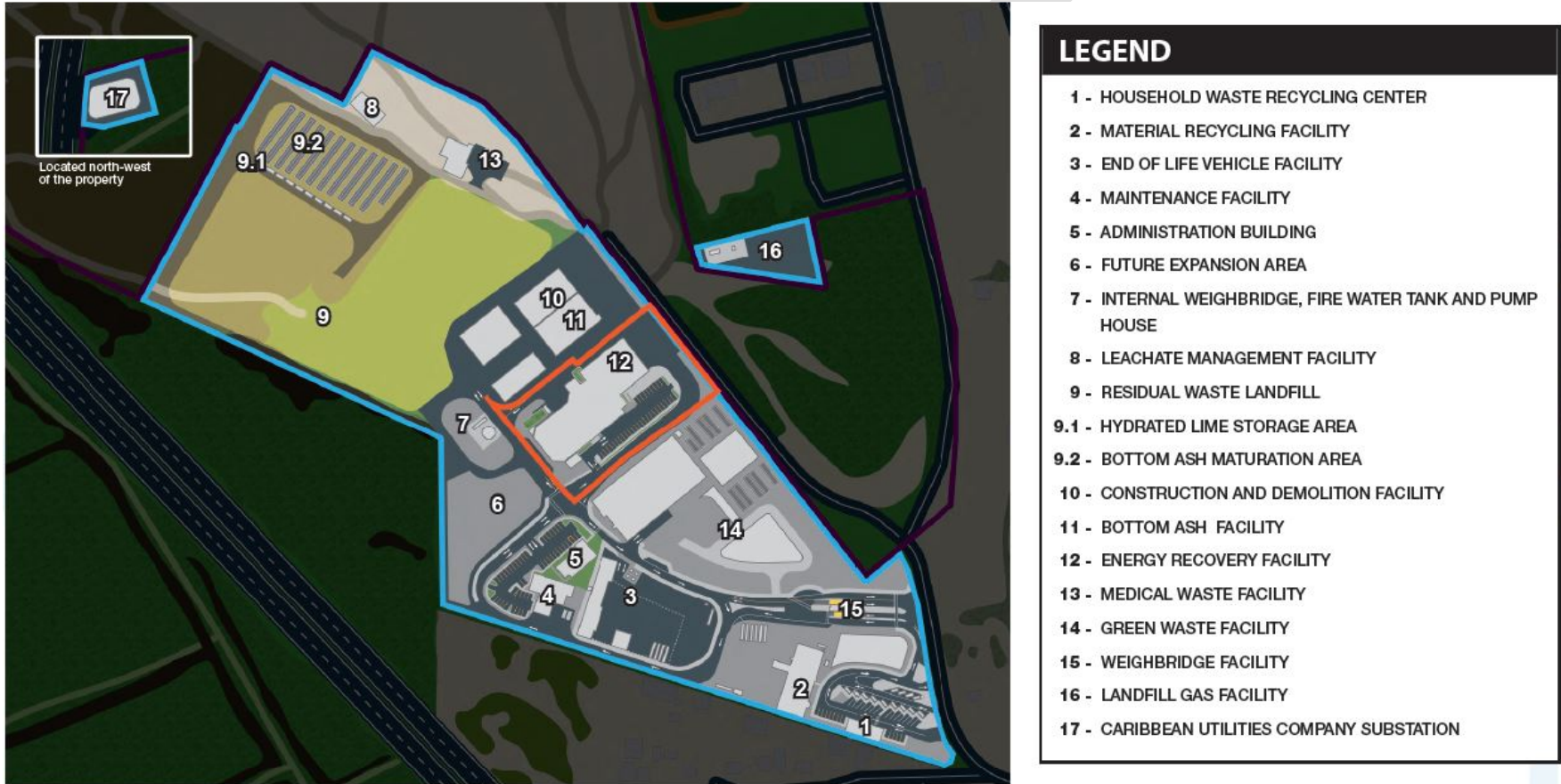


Figure 3.2 ISWMS Facilities

3.2 About the Energy Recovery Facility

The proposed Energy Recovery Facility is a modern controlled combustion (or mass burn) facility that will convert combustible, non-recyclable waste to chemically inactive ash (bottom ash, air pollution control residue and boiler ash). The volume of incoming waste will be reduced by about 90 percent through this process.

The Facility is anticipated to process up to 120,000 tons of municipal solid waste per year. The heat emitted from the combustion of waste will be captured to produce electricity for sale to the Caribbean Utilities Company.

Bottom ash will be managed via the proposed bottom ash recycling facility at the ISWMS Site. Air pollution control residue and boiler ash will be disposed of at the proposed Residual Waste Landfill.

Advanced air pollution control and continuous emissions monitoring systems will ensure that the Facility's emissions can meet current and future standards, and not pose an adverse effect to the environment.

The Facility has four primary processes.

1. **Combusting** – The Energy Recovery Facility will turn waste into electricity by combusting it at very high temperatures.
2. **Steam** – The heat is used to produce steam that drives a turbine to generate electricity, which is supplied to the grid.
3. **Recycle** – After the waste is completely burned, any leftover materials, such as steel or aluminum, will be recovered and recycled.
4. **Filter emissions** – State-of-the-art technology scrubs emissions to European Union Industrial Emissions Directive standards.

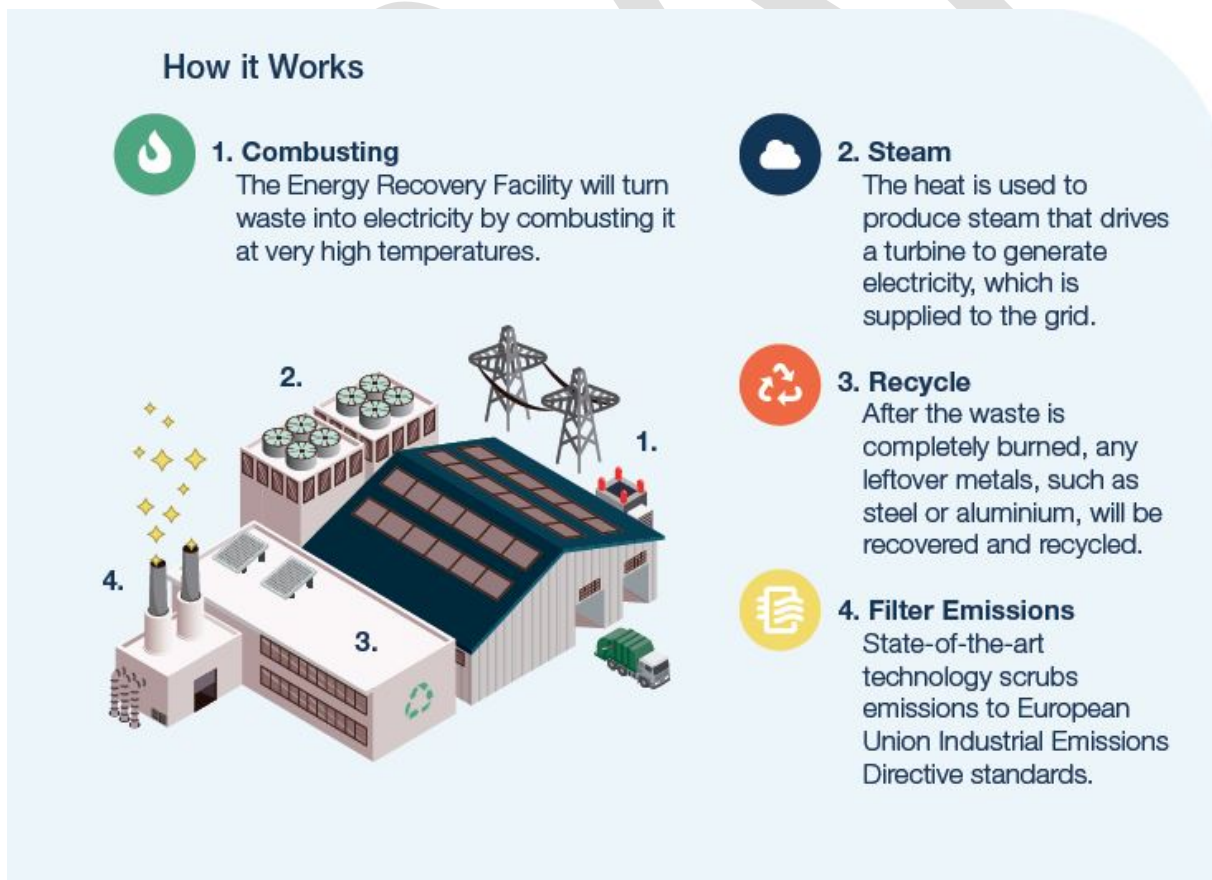


Figure 3.3 Energy Recovery Facility Process

Access, security and lighting

The ISWMS Site will be accessed along the same route as the current George Town Landfill operations: from the south, via Seymour Drive. A metal chain-link perimeter fence will be installed for Site security. Access to the ISWMS Site is provided via a 24-foot main gate on the south side of the property.

As 90 percent of the activity at the ISWMS Site occurs from dawn to dusk, lighting is restricted to the main access road to allow for waste deliveries and building eves. Closed-circuit television cameras will monitor the property, ensuring total coverage.

Working hours and employment

The ISWMS Site's working hours will vary between facilities based on the specific work demands and needs, as well as open hours necessary for the public and companies using the facilities. The Project is anticipated to create approximately 70 full-time positions during operation.

Landscaping

As part of the ISWMS Site's landscaping, native species will be planted to create an attractive setting and soften the appearance of the development. Landscaping will also enhance biodiversity across the Site. Materials will be chosen that complement the surrounding landscape, and reflective materials and bright colours will be avoided where possible. Small trees and bushes will be planted in some areas, especially toward the edge of the Site, helping to create connectivity between habitats. Tree planting around the entrance will help soften the perimeter fence and create a more interesting gateway.

3.3 Design and construction

All project designs will be in accordance with applicable codes and amendments referenced in *The Building Code (Amendments) Regulations (2016)*. The design, construction, and testing of ISWMS facilities will generally follow harmonized European standards and meet all applicable legislation. Where standards are not available, appropriate national or international standards will be used in line with good industry practice.

Construction activities will involve:

- A Construction Environmental Management Plan, Site Waste Management Plan and a Health and Safety Plan
- Appropriate geotechnical investigations and surveys
- 'Flexible' designed buildings that are sustainably reused and reconfigured to meet future needs
- The use of locally available construction materials (such as construction and demolition waste)
- Site preparation, including clearance, Site levelling, compaction and demolition
- An approximate 2.5-year timeline to design, engineer, procure and construct the Energy Recovery Facility
- An approximate 1.5-year timeline to design, engineer, procure and construct the non-energy recovery facilities

The aim is for all ISWMS facilities to be ready for operation at the same time.

As part of the ISWMS Project, the George Town Landfill current waste mound will be remediated. The Landfill may take several years to stabilize, and monitoring programs will determine its final use.

3.4 Community sustainability

The Project will generate positive sustainability benefits to Cayman, such as:

Reduced emissions – The remediation of the George Town Landfill is anticipated to cut greenhouse gas emissions by more than 25,000 tons per year. That's like removing more than 5,000 cars from our roads every year. When the new waste management facilities are up and running, they will help create a cleaner and greener Cayman Islands, benefitting the whole community.

Reduced landfilling – Through the "reduce, reuse, recycle and recover" key elements of the waste management process, the proposed development has the capacity to divert up to 95 percent of the community's waste away from the landfill.

Improved recycling – New facilities for processing green waste, metal, household waste, and construction and demolition waste will allow more things to be recycled.

Sustainable power – Cayman's trash will be used to generate approximately nine megawatts of electricity. That's enough to power more than 2,000 homes and businesses in Grand Cayman.

Facility designs include a preference for equipment with high energy efficiency specifications and sustainable lifecycle costs. Main operations focus on electricity generation by the Energy Recovery Facility. The Energy Recovery Facility will also meet the classification for a recovery facility rather than a disposal facility. Water conservation measures will be adopted throughout the design of each ISWMS facility.

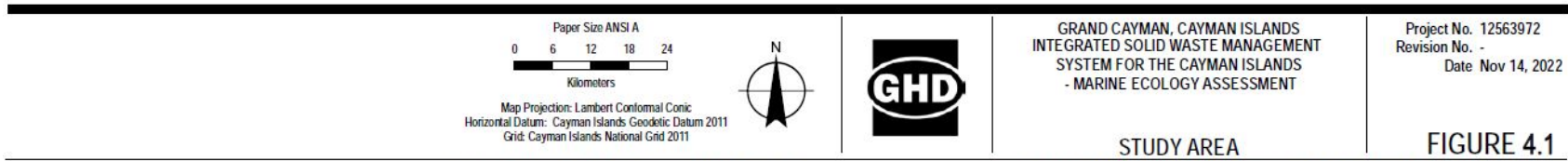
4. Summary of effects and mitigation

The Terms of Reference for the ISWMS concluded that these topics should be addressed in the Environmental Impact Assessment to determine significant impacts and mitigation efforts for the Project:

- Marine ecology
- Terrestrial ecology
- Hydrology and hydrogeology
- Land quality
- Landscape and visual elements
- Air quality and greenhouse gases emissions
- Noise and vibration
- Traffic and transport
- Socio-economics

4.1 Marine ecology

The consultant team has completed background information reviews to get a sense of the Project's marine environment, with a focus on marine and coastal habitats, wildlife, protected species, and significant natural areas. The Study Area includes the North Sound and wider coastal waters, extending from the mean high-water mark on Grand Cayman to 12 nautical miles (22.2 kilometres) out. These reviews included a desk study, habitat survey and habitat mapping, and protected species surveys to identify the marine ecology within and close to the ISWMS Site.



Q:\GIS\PROJECTS\12563972\Layouts\MarineEcology\12563972_MarineEcology_GIS003.mxd
Print date: 14 Nov 2022 - 11:42

Data source: ESRI, GEBCO, NOAA, National Geographic, Garmin, HERE, Geonames.org, NGDC, National Conservation (Marine Parks) Regulations (2021 Revision).

Figure 4.1 Marine Ecology Study Area

4.1.1 Baseline data and existing environment

To establish a comprehensive baseline condition of the Study Area's marine environment, the consultant team obtained records of protected species and species habitat mapping, as well as natural features within the Study Area. The team also carried out baseline studies of the oceanography and biology of the shallow marine environments of Grand Cayman.

The three Cayman Islands are flat, low-lying limestone islands with large offshore reef systems, mostly surrounded by reefs and mangroves that enclose sand- and seagrass-filled lagoons. With these habitats come diverse marine species, including several molluscs and crustaceans. Marine habitat mapping within a 1.2 mile (2 kilometre) radius of the Site displayed the following habitats:

- Shelf benthic classification
 - Aggregated patch reef
 - Beach rock
 - Colonized hardbottom
 - Rubble
 - Sand
 - Spur
 - Uncolonized hardbottom
- Lagoon benthic classification
 - Hardbottom
 - Seagrass beds
 - Silt
 - Vegetated sand

4.1.2 Impacts

The proposed development will result in:

- No anticipated direct discharge to the marine environment.

Based on an impact analysis, it was found that, because there is no anticipated direct discharge to the marine environment from the ISWMS Site, there are no anticipated impacts to the surrounding marine environment. However, as the Facility design is not yet finalized, there is a possibility (although unlikely) of direct marine discharge of cooling water to the North Sound if the anticipated discharge alternatives prove to be infeasible. An assessment of this possible outcome proved not significant with mitigation in place to ensure no impacts to natural communities impacting the North Sound. There are also no significant impacts anticipated while importing waste from the Sister Islands.

Habitat and wildlife interference or strikes may be possible, resulting from vessel movements between the islands during operation. Most components lie outside of marine natural areas, however there may be protected species present in select areas and when importing waste from the Sister Islands.

Monitoring will be in place during construction and operation for erosion and sediment control. By applying proposed mitigation measures, best management practices and restoration conditions, the potential residual effects on the marine environment within and around the ISWMS Site are considered not significant.

4.2 Terrestrial ecology

The consultant team's ecologists have completed background information reviews to get a sense of the Project's terrestrial environment, with a focus on terrestrial habitats, wildlife, protected species, and significant natural areas. The Study Area includes the ISWMS Site and the area within 1.2 miles (or 2 kilometres).

As part of the study, the consultation team collected and reviewed information from Cayman Islands Department of Environment, Google Earth, the UK Overseas Territories and Crown Dependencies, Cayman Islands National Trust and iNaturalist. The team also completed:

- A field reconnaissance assessment of existing conditions and sensitivities, including taking Site photos.
- Equipment installation within the site to determine the presence or absence of wildlife.

4.2.1 Baseline data and existing environment

The ISWMS Site lies within a landscape that is mostly heavily developed. Immediately north of the Site lies the George Town Landfill – the northwestern part of the proposed ISWMS Site is formed of part of the landfilled area. An inland mangrove and the Esterley Tibbetts Highway are to the west, and to the northeast is the Cayman Islands Wastewater Treatment Plant. Immediately south and east of the ISWMS Site is an industrial area made up of bare land, storage of plant equipment, and a series of low-rise industrial buildings.

The ISWMS Site consists of areas of filled land, mangrove, poorly vegetated land, and bare ground. The southwest part of the ISWMS Site is made up of a mangrove community. The remainder of the ISWMS Site is a combination of bare ground, landfilled ground, and a few small operations buildings with little or no vegetative cover. Vegetation clearing was completed in the southeast part of the Study Area.

The project team collected records of protected species, species habitat mapping, and information on additional natural features to establish a baseline condition of the Study Area's terrestrial environment. A terrestrial habitat assessment was conducted and natural vegetation communities within the ISWMS Site were identified. The team completed a photographic botanical inventory and refined vegetation mapping using a vegetation classification system.

Wildlife monitoring was conducted to collect data on bat houses and colonies, resident and migratory bird species, and incidental wildlife that may traverse the ISWMS Site.

Several species of wildlife were recorded on the ISWMS Site such as the green iguana (*Iguana iguana*), and red junglefowl (*Gallus gallus*). Results also found that the terrestrial habitat within the south-east portion of the ISWMS Site, while mapped previously as Primary Habitat, is no longer consistent with the definition of 'primary habitat'.



Legend

- ISWMS Site Boundary
- Study Area
- Bat House and Colony
- National Conservation Act (NCA)
- National Trust
- Mangrove
- Wetland

Paper Size ANSI A

0 0.25 0.5 0.75 1

Kilometers

Map Projection: Lambert Conformal Conic
Horizontal Datum: Cayman Islands Geodetic Datum 2011
Grid: Cayman Islands National Grid 2011



GRAND CAYMAN, CAYMAN ISLANDS
INTEGRATED SOLID WASTE MANAGEMENT
SYSTEM FOR THE CAYMAN ISLANDS
- TERRESTRIAL ECOLOGY ASSESSMENT

Project No. 12563972
Revision No. -
Date Mar 1, 2023

EXISTING CONDITIONS

FIGURE 4.2

D:\GIS\PROJECTS\12563000\12563972\Layouts\TerrestrialEcology\12563972_TerrestrialEcology_GIS006.mxd
Print date: 01 Mar 2023 - 12:31

Data source: DoE, ESRI, GEBCO, NOAA, National Geographic, Garmin, HERE, Geonames.org, NGDC.

Figure 4.2 Terrestrial Ecology Existing Conditions

4.2.2 Impacts

The proposed development will result in the removal of 33 acres (or 13.35 hectares) of terrestrial habitat and 1.7 acres (0.7 hectares) of inland mangrove habitat. During construction, there may be potential loss of vegetation that could serve as habitat to species that have been found within and around the landfill site. However, since the Site is sparsely populated, it is not considered suitable for species to live in due to ongoing activities. Some fauna species may be eliminated due to construction during Site preparation. Some sedimentation and erosion may result as an indirect result of the removed vegetation.

Associated residual effects include vegetation loss, soil erosion, dust, noise and vibration, and spills. Monitoring will be in place during pre-construction, construction and operation for fauna, and erosion and sediment control.

There may be protected species in select areas throughout the ISWMS Site – mainly mangrove-dwelling wildlife species such as birds and bats. To address any impacts, recommended mitigation measures have been provided throughout construction and operation.

The potential residual effects on the terrestrial environment within and around the ISWMS Site are considered not significant due to the application of proposed mitigation measures and management best practices.

4.3 Hydrology and hydrogeology

Members of the consultant's technical team examined the potential impacts that the ISWMS would have on hydrology (surface water) and hydrogeology (groundwater) within a 1.2 mile (or 2 kilometre) Study Area of the ISWMS Site, specifically effects on:

- Water quantity (level and flow)
- Water quality
- Surface water flows
- Immediate and downstream morphology
- Sediment dynamics
- Flood risk

Technical researchers studied the effects the site might have on several elements, including:

- Water environment (including the Ironshore Formation aquifer, located beneath the proposed Site; the Bluff Group aquifer, which consists of the Pedro Castle Formation aquifer, the Cayman Formation and Brac Formation, also located beneath the proposed ISWMS Site; and the North Sound)
- Water use (including groundwater abstraction for the purposes of geothermal cooling and potable water)
- Humans, properties and infrastructure within areas prone to flooding

4.3.1 Baseline data and existing environment

Hydrology

- The northern channel is fringed with mangroves and is culverted below Esterley Tibbetts Highway to the west of the ISWMS Site. Its water level fluctuates with the tide and is potentially affected by leachate from George Town Landfill, which acts as a potential source contaminants.

Hydrogeology

- Groundwater beneath the ISWMS Site is shown to be tidally influenced indicating hydraulic connectivity between the groundwater and ocean, resulting in considerable mixing of saltwater from the ocean and freshwater, causing transition zone of brackish water.

- Grand Cayman potable (drinkable) water is supplied from desalination plants by reverse osmosis abstracted at depth (250 feet or 76 metres).
- The ISWMS Site is not considered to be close to any major freshwater lenses, which are located on the eastern side of the Island.
- A number of abstractions are located within 1.2 miles (or 2 kilometres) of the ISWMS Site for potable water supply, cooling water, and geothermal cooling purposes.

Water Quality

- Groundwater and surface water data in the vicinity of the ISWMS Site have been analyzed throughout the sampling period. Contaminant cleanup target level exceedances have been identified for certain analytes.

4.3.2 Impacts

The following measures included in the design of the ISWMS will mitigate most impacts related to hydrology and hydrogeology:

- Facility design standards for still water elevation, Base Flood Elevation, and Design Flood Elevation based on Hurricane Ivan and US FEMA guidance
- Appropriate storage and material handling
- Leachate management at the Residual Waste Landfill
- Stormwater Management Plan
- Groundwater abstraction and injection modeling simulations demonstrate no impacts on Caribbean Sea, North Sounds, the residential canals or nearby water users

Mitigation measures for potentially significant impacts associated with the construction, operation and decommissioning of the ISWMS are recommended, including:

- A detailed surface runoff management plan with proposed runoff collection and treatment options, and encouraging appropriate infiltration of runoff to groundwater, mimicking the natural infiltration process.
- A detailed wastewater and sewage plan that minimises the risk of leaks and spills within the system, with considerations on changes to the local climate and sea level due to climate change.
- A Waste Management Plan with waste management planning for emergency situations.
- An appropriate grade of concrete used in the design of the development that prevents sulphate attack and degradation of infrastructure under its surface in the event of groundwater contamination.
- A sensitivity to flooding incorporated in the ISWMS Site's design and Environmental Management Plan, such as finished floor levels, raised equipment above anticipated flood water levels, built surfaces that direct floodwater away from sensitive infrastructure and evacuation routes, and a hazard management plan used in response to government-issued warnings.

With these mitigation measures adopted, the significance of these potential impacts are considered to be minor, except for the residual risk of tidal flooding and extreme weather and climate change-induced flooding, which can cause lasting effects to Site infrastructure and risk life.

Due to the current unsustainable design and practices at the George Town Landfill and resulting impacts to groundwater quality, the construction of the ISWMS will likely result in net environmental benefits due to improved waste management practices and facilities.

4.4 Land quality

Members of the consultant's technical team examined the potential land quality impacts (such as land stability, wind-blown dusts and land contamination) that the ISWMS would have on human health, ISWMS infrastructure and

surrounding land users (homes, businesses and schools). The study encompasses the footprint of the ISWMS and the surrounding land within approximately 250 yards (or 229 metres). This includes:

- The existing George Town Landfill.
- Parts of the land owned by the Cayman Water Authority to the east, with four former wastewater treatment lagoons (now used for sludge) and a current wastewater treatment plant.
- The mangrove to the south, along with a concrete batching plant and a concrete block and paving stone manufacturer.
- The Esterley Tibbetts Highway and parts of the Lakeside Development to the west.

4.4.1 Baseline conditions and existing environment

The ISWMS Site's elevation ranges between 7 and 20 feet (2 and 6 metres) above sea level and the surrounding land is mostly flat and low lying, except for the George Town Landfill. The landfill's north mound is around 100 feet (30 metres) above sea level and the south mound is around 40 feet (12 feet) above sea level.

Beneath the ISWMS Site lies four geological units, including man-made deposits (waste materials covered with topsoil and shot rock), organic peat, an Ironshore formation and a bluff formation of limestone and dolostone. Exposure to earthquakes is possible and a lack of strong quakes in Grand Cayman over the past 300 years could mean that seismic energy is currently accumulating in the fault line, resulting in a large magnitude earthquake in the future. No liquefiable soils are located at or around the ISWMS Site.

4.4.1.1 George Town Landfill

The proposed ISWMS footprint (except for the Landfill Gas Facility proposed to be overtop the old landfill) lies outside of the George Town Landfill's old landfill area, main landfill area and Hurricane Ivan fill area (a flat area in the north-west part of the site that was infilled with demolition and related wastes from disaster clean-up operations following Hurricane Ivan in 2004).

An arsenic containment cell is proposed to lie within the ISWMS footprint, located beneath the Residual Waste Landfill.



Figure 4.3 Boundary and Layout of the George Town Landfill

The Cayman Islands Government's Department of Environmental Health gathered leachate sampling data to the west of the main landfill from 2016 to 2020. Arsenic and chromium values analyzed in 2020 were substantially higher than corresponding data for ground and surface water samples.

Using gas probe data, the team found that due to the unlined nature of the George Town Landfill, underground movement of landfill gases and vapours does pose a potential risk to the ISWMS. But given the distance between the active area of the landfill and ISWMS facilities, as well as the existing and planned active gas management system within the landfill's north mound, along with the presence of the Residual Waste Landfill between the north mound and its facilities, it's likely any meaningful gas movement from the George Town Landfill to the ISWMS facilities is minimal.

Since the current landfill operates on outdated waste management principles and lacks most environmental mitigations commonly applied to modern facilities, local regulators have identified leachate emissions as one of the main sources of contamination to the North Sound. The National Solid Waste Management Strategy for the Cayman Islands anticipates that the landfill will be closed, but is expected to continue to operate while the new ISWMS is developed and implemented. Remediation and restoration work options are proposed, including landfill mining and capping.

4.4.1.2 Soil and gas baseline data

Contamination within the ISWMS footprint is most likely associated with historic waste handling and disposal activities at the landfill. Potential contaminants located at various areas of the Site (landfill, oil and hazardous waste storage area, equipment storage area, arsenic containment cell and an old scrap and tyre stockpile area) include materials

such as metals, combustion products, asbestos, arsine gas, pesticides, paints and solvents, organic vapours and landfill/ground gases.

The entire ISWMS footprint, with the possible exception of the Caribbean Utilities Company Substation, is expected to be on land affected by landfill or waste disposal activities. Little soil analysis is available that is relevant to the actual footprint of the Site itself and not to the George Town Landfill. Within the northern third of the ISWMS Site, data does not suggest that substantial contamination will be encountered, and no data is available for all other ISWMS components in the south, so the project team could not make conclusions regarding present soil contamination.

Landfill gas, generated from the George Town Landfill, could laterally affect the ISWMS Site with no basal liner at the landfill, however it's not likely any meaningful above-ground movement will exist.

4.4.2 Impacts

Any of the following potentially significant impacts related to the ground conditions and geological setting of Grand Cayman can be reasonably mitigated for the ISWMS Site, including:

- The low bearing capacity of the existing waste surface layer (mitigated by transferring the development loads to the Ironshore or bluff formation bedrock).
- Sinkholes and foundational damage (mitigated by installing geotextiles – permeable fabrics that separate, filter, reinforce, protect and drain soil – and geogrids - geosynthetic, grid-based material used to reinforce soils – on the Ironshore formation).
- Ground instability (mitigated by avoiding cavity locations in the bedrock of the bluff formation).
- Earthquakes and seismic activity (mitigated by the design of the ISWMS facilities and foundation systems to withstand effects).

The following potentially significant effects were identified through the geoenvironmental assessment:

- Health effects on ISWMS Site staff, construction workers and visitors through exposure (and potential spread) of contaminated soils at the site surface and release of runoff, dusts, gases and vapours within the Old Scrap and Tyre Stockpile Area and underlying soils of Areas 2 and 3 during construction.
- Health effects on ISWMS Site staff, construction workers and visitors through disturbance of existing contamination within the Equipment Storage Area, particularly the Oil and Hazardous Waste Storage Area during construction.
- Health effects on surrounding land users from failure of the landfill cap (e.g., due to flawed engineering, extreme weather events or sea level rise).
- Health effects on ISWMS Site staff, construction workers and visitors through accumulation of asbestos fibres in underlying soils, and potentially released and spread during treatment, and onward during reuse as aggregate during operation.
- Health effects on surrounding land users through the spread of wastes and contamination in floodwater/runoff leading to effects on soils beneath Area 2 and surrounding land.

It is likely that any pre-existing wastes that are present will not result in unacceptable levels of contamination. Established procedures should ensure that filling materials during construction do not contain hazardous materials which can pose a risk to workers.

Construction and operation of the ISWMS is expected to result in net, long-term environmental benefits compared to the unsustainable design and impacts to soil and groundwater quality of the current George Town Landfill.

4.5 Landscape and visual

Members of the project team analysed the effects of construction and operation of the proposed ISWMS on the landscape, concentrating on effects to the landscape and townscape character, as well as the views and visual amenity of people who live, participate in recreational activities, work and/or travel through the area around the

proposed ISWMS on the western side of Grand Cayman. The team defined a landscape and visual Study Area which extends 3 miles (5 kilometres) from the ISWMS Site boundary.

The following five landscape and seascape character zones were identified within the Study Area:

- **Tourism foreshore and George Town Centre**
(includes the designated tourism industry zone along the western coastal area and George Town Centre – the bustling hub of Grand Cayman)
- **Industrial, waste and airport**
(includes various industrial and waste industries, as well as the Owen Roberts International Airport located primarily east and south of the Project Site)
- **Residential settlement**
(includes a mix of low to medium-height buildings and single-family homes, with views from the north side of Keturah Street looking toward the Project south, the east side of Sorrel Drive looking southwest, the south side of Selkirk drive looking west, the south side of Crewe Road looking north, the east side of Abbey Way looking west and the west side of Canal Lane looking northeast)
- **Mangroves and recreation**
(includes low-lying coastal mangroves and sedge vegetation dominating the Study Area's eastern and southern sides, and views from the North Sound Gated Community looking east, Pinehurst Road looking east, north of Blue Lagoon Drive and the east side of Safehaven Drive looking east)
- **Caribbean Sea and North Sound lagoon**
(includes the distinct eastern and western seascapes that envelop the Project site on its eastern and western sides, with mangrove swamps, anchor points for cruise ships and popular tourist destinations and hotels located in the area)

Sensitive visual receivers in the Study Area include residents, pedestrians, road users, cruise liner users, and workers of the industrial zone. Eight viewpoint locations were chosen to assess the visual effects of the Project on sensitive receivers within the Study Area.

4.5.1 Baseline data and existing landscape and visual environment

The proposed ISWMS Site is situated within an area of mixed low-density residential neighbourhoods with single-family homes and high-density commercial areas with multi-story buildings. The immediate surroundings of the proposed Site are zoned for industrial or commercial use and feature warehouses, factories, and storage yards. Many key visual features were identified in the Study Area, such as West Bay Road's linear tourist drive, the observation tower at Camana Bay, the ruins of the 18th century fort on Harbour Drive and Fort Street, and a mix of historic and contemporary architecture (i.e., Town Hall and the Harquail Theatre).

Project team members gathered and viewed existing data, including the following landscape and visual resources:

- Project design information and site photographs
- Land use, and vegetation maps
- Aerial imagery, Google Earth and Google Street views

To determine the existing natural and cultural features (i.e., key seascape, landscape and spatial elements, features, and values) the following aspects were considered:

- Land use and built form
- Landform, topography, and hydrology
- Vegetation
- Views
- Historical features
- Coastal edge

- Water column depth and qualities
- Seabed geology and form
- Key habitats, features, and species

A visual analysis was also performed to establish:

- The key views
- The Project's viewsheds
- Other visual features within the Study Area

4.5.2 Impacts

Potential landscape impacts of the ISWMS include evaluating the effect of the change and development on the landscape as a resource. Potential visual impacts of the ISWMS include assessing the effects of change and development on the views available to people and their visual amenity from various locations.

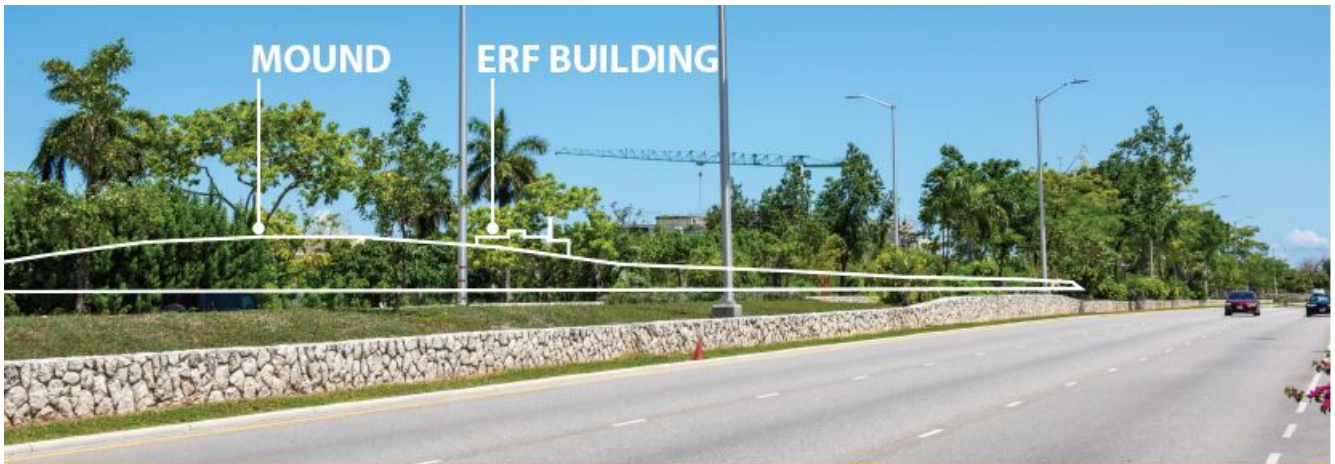
The potential impacts on landscape character were determined based on the sensitivity of the existing landscape and the magnitude of change that is likely to occur. Visual considerations were evaluated from key vantage points, where there is particular interest in the view and where there are sensitive viewpoints.

The landscape assessment found that the Project would have negligible to moderate impacts on several surrounding areas. There is a moderate effect associated with the industrial, waste and airport landscape character zone, as the tall ventilation stack's height is found to have high visibility and represents the highest point of the Project on the island.

The residential settlement, and Caribbean Sea and North Sound lagoon landscape and seascape character zones were found to have minor effects because of the potential for the Project's appearance to be partly mitigated by the current vegetation that would help obscure the facilities from the distance of the settlements, and because the ISWMS is located far from the North Sound lagoon zone, causing an almost imperceptible change or no change to the landscape character of that zone, respectively.

The visual assessment found that the Project would range from having a minor to a major level of impact depending on the viewpoint. Mitigation measures will be used to ensure that real-time landscape and visual changes are kept to a minimum. The visual assessment found that the Project would have a major visual effect from the United Pentecostal Church, from tall residential properties on Seven Mile Beach, from cruise liners anchored off Seven Mile Beach, and from the North Sound Lagoon. Users of the church and residents on Woodlake Drive, residents on Seven Mile Beach, tourists and staff of the cruise liners off Seven Mile Beach and users of the North Sound Lagoon are all assessed to have a high sensitivity to the change in viewpoints, with prolonged and permanently altered views where the Project is located.

A moderate visual effect is experienced from residential properties on Lakeside Villas, as a series of large industrial buildings and the ventilation stack are visible, but partly obscured behind the existing vegetation and tree line. Users of the National Galley of the Cayman Islands, as well as residential properties on Marbel Drive, and users of the Camana Bay Observation Tower will experience a minor overall visual effect to the change in views brought on by the Project, as obstructions relegate the Project to being mostly out of sight behind existing structures, vegetation and tree lines.



Viewpoint from the National Gallery of the Cayman Islands' entry drive intersection.



Viewpoint from the northern point of Woodlake Drive (in the United Pentecostal Church parking lot, facing east).



Viewpoint from approximately 1.5 kilometers off the coast of the North Sound lagoon.

Figure 4.4 Three Viewpoints Showing an Artist's Rendering of the ISWMS

4.6 Air quality and greenhouse gases emissions

Emissions of air pollutants are known to have a negative impact on human health and surrounding ecology. The activities proposed during construction and operation of the ISWMS could potentially elevate air emissions, which can affect air quality in the vicinity of the Site.

The air quality and greenhouse gases assessment:

- States the existing sources and volume of greenhouse gases in the vicinity of the ISWMS, such as the existing George Town Landfill, Esterley Tibbetts Highway, and Owen Roberts International Airport, and which estimates that the current annual greenhouse gas emissions from the Cayman Islands is approximately 720,000 tonnes of CO₂ equivalent.
- Outlines potential impacts from the construction and operation of the facility on local air quality.
- Determines the significance of likely potential effects.

The consultant's team defined an Air Quality Study Area of up to 6 miles (or 10 kilometres) in all four cardinal directions of the ISWMS Site. A detailed assessment of the air quality-related aspects of the proposed development was undertaken, including:

- A discussion on the existing environment and baseline conditions.
- ISWMS operation key components and contaminants of concern.
- Key sensitive receptors.
- Modelling results and evaluation.

The assessment of the effect on air quality from the ISWMS was performed by conducting dispersion modelling to predict the downwind concentrations of air contaminants and comparing these predictions to regulatory standards and guidelines.

4.6.1 Baseline data and existing environment

Ambient air monitoring was conducted at seven stations: Cox Lumber, Paddington Place, George Town Primary School, OPY 20, Lakeside, Cayman International School, and Laundry for a period of up to two weeks. Using emission estimates and dispersion modelling, a theoretical background emissions assessment for nitrogen dioxide was conducted and compared to the results of a nitrogen dioxide monitoring program. Existing air quality in the Study Area was shown to be compliant with the applicable air quality standards, except for an odour-based standard for hydrogen sulphide resulting from landfilling activities. The Department of Environmental Health, GHD, Valley Environmental Services (VES), and Dart Enterprises Cayman all contributed to the creation, management and data collection for the program.

4.6.2 Impacts

The potential impacts of the ISWMS on local air quality were assessed by modelling the estimated maximum emissions of each contaminant to determine the maximum potential concentration of each that could occur off-Site. The cumulative air quality impacts were compared to relevant standards and guidelines, and to the existing air quality conditions. All cumulative impacts are shown to be within acceptable air quality standards.

By applying the proposed mitigation measures, the results of the air quality and greenhouse gases assessment indicate that there are no significant impacts to human health, quality of life or ecological receptors (plants and animals, habitats or ecosystems) anticipated.

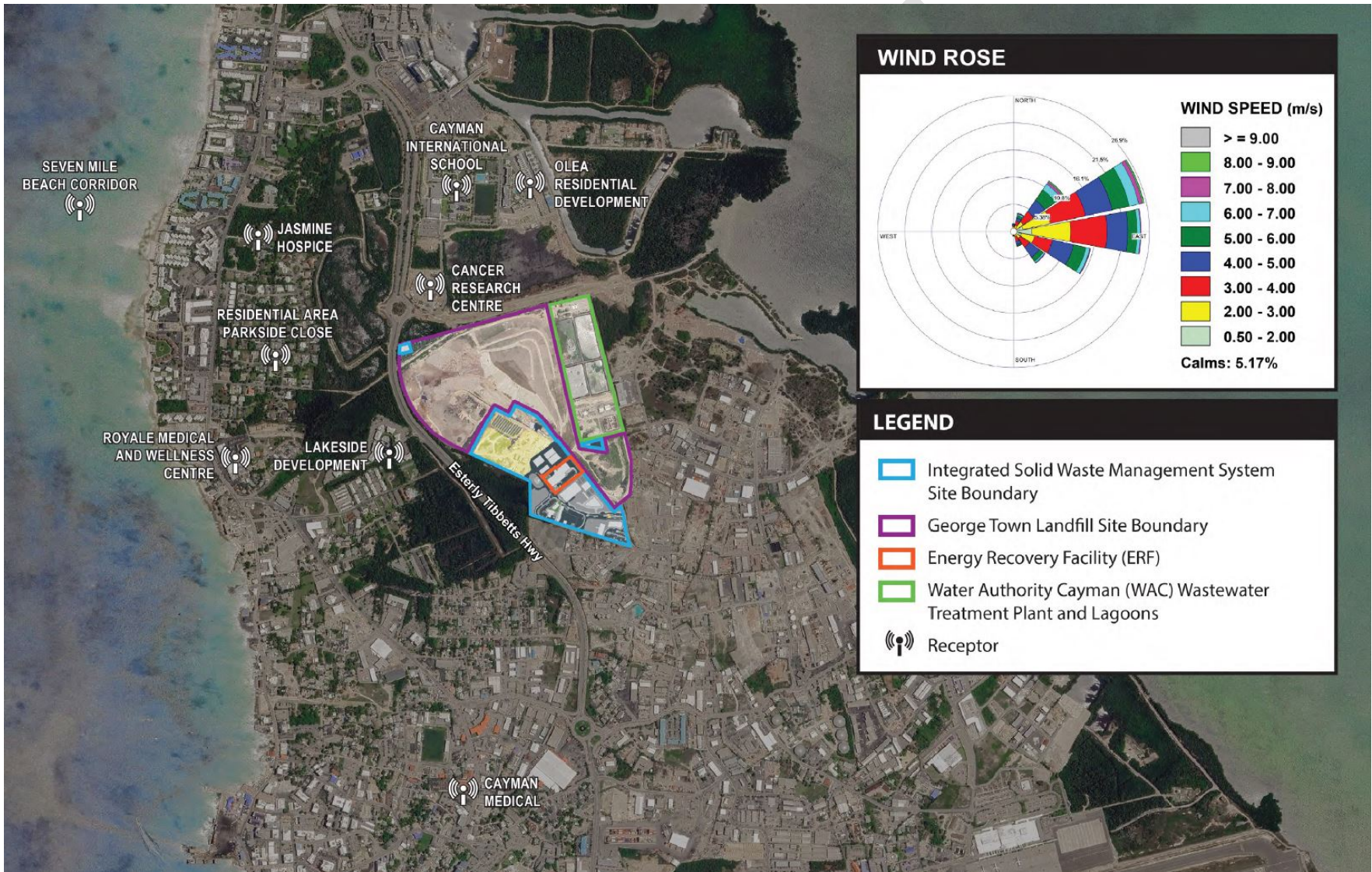


Figure 4.5 Air Quality Key Sensitive Receptors

4.7 Noise and vibration

Unwanted noise and vibration have a negative impact on human health and quality of life. The activities proposed during construction and operation of the ISWMS were evaluated to determine if they would potentially result in an increase to noise and vibration levels in the vicinity and cause significant effects on health and quality of life.

The following Study Area and assessment boundaries were established for the noise and vibration impact assessment:

- Spatial boundaries, including a Site Study Area (the land directly disturbed by project construction activities), a local Study Area (all lands within a 3,281 foot or 1,000 metre radius of the site Study Area's boundaries), and a regional Study Area (all lands connected to the Esterley Tibbetts Highway).
- Temporal boundaries, including project phases (such as construction, operation and decommissioning) and temporal characteristics (such as seasonal fluctuations in traffic volumes and composition, and fluctuations in weather patterns and their effect on how noise spreads).
- Technical boundaries, including accuracy of the sound level data and traffic data used in the assessment, modelling accuracy and level of detailed design.
- Sensitive receptor locations (such as permanent or seasonal residences, nursing and retirement homes, hotels and motels, rental residences, hospitals, campgrounds, parks, schools, cemeteries or places of worship).

4.7.1 Baseline data and existing environment

Noise and vibration monitoring data on the existing environment were collected through the use of six noise sensitive receptors, located at:

- Lakeside residential dwelling, immediately west of the proposed ISWMS Site
- Residential dwellings on Parkside Close (northwest of the Site), Seymour Road (southeast of the Site), and on Woodlake Drive/Glenwood Drive (southwest of the Site)
- Cayman International School
- Proposed new Health City Camana Bay Medical Campus (north of the ISWMS Site)

Seasonality on the Cayman Islands consists of a wet and a dry season. The dry season usually begins in early November and lasts until April. Monitoring took place beginning in October 2021, which measured noise emissions occurring during the rainy season and after the summer school break. This allowed for regular traffic to be observed and documented. Baseline monitoring to determine background sound levels was completed over a span of five to eight days and included both weekday and weekend days for evaluation.

The sound characteristics and current ambient acoustical environment at the study's four noise monitoring locations are characterized by noise that is attributed to:

- The Esterley Tibbetts Highway
- The Owen Roberts International Airport
- Landfill operations and local commercial and industry areas to the southeast
- The natural environment

Baseline noise data is a good representation of typical existing sound characteristics around the ISWMS's development. The assessment confirms that:

- The sound levels in the Study Areas near the Esterley Tibbetts Highway are generally high during the day and low at night.
- Residential receptors close to commercial industries generally experience higher sound levels during the day than during the night.

- Residential areas removed from road traffic and industry areas generally experience lower sound levels, consistent with an urban area.

These documented baseline sound levels were used in comparison to the predicted noise impacts during construction and operation of the proposed ISWMS to determine the potential for noise impacts.

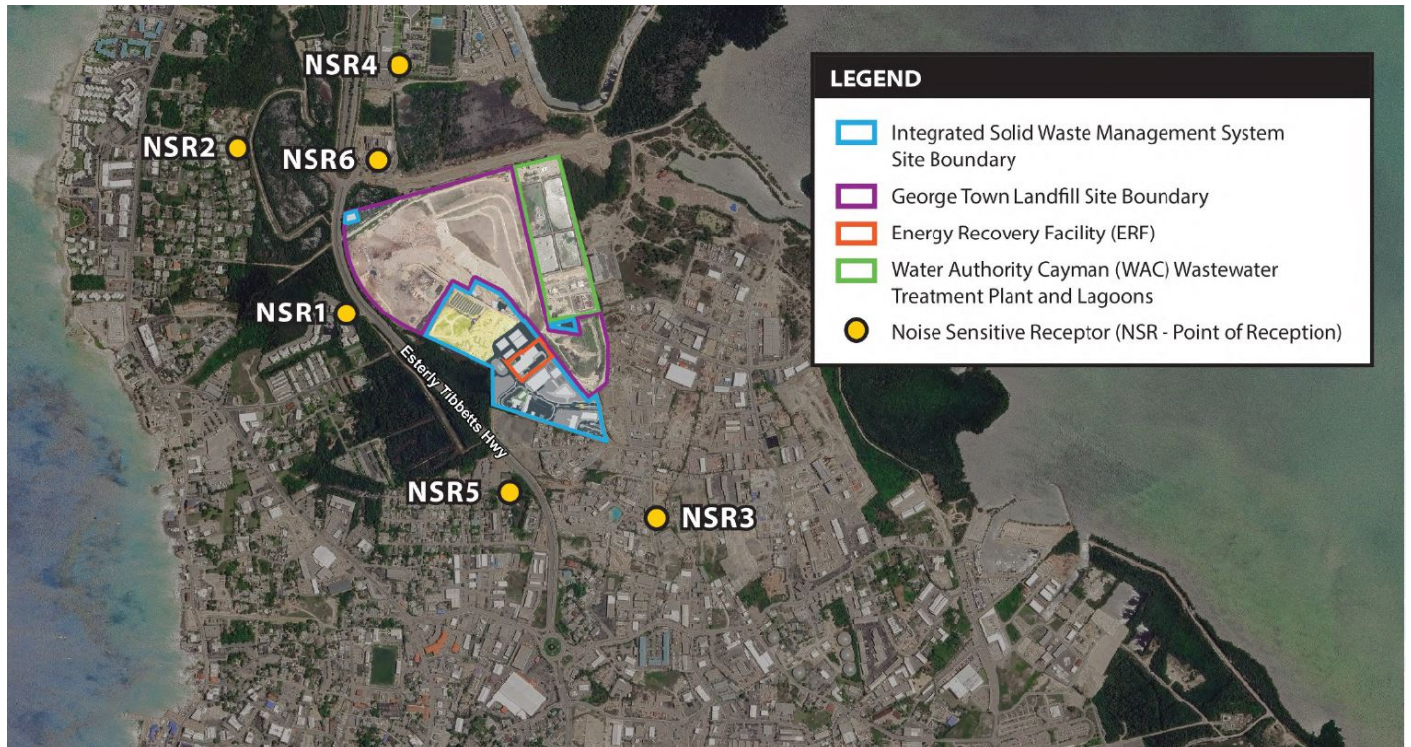


Figure 4.6 Noise Sensitive Receptor Locations

4.7.2 Impacts

The project team considered and assessed the Project's potential construction and operational noise impacts that affect sensitive receptors. A 'worst- case' scenario wherein all ISWMS facilities are in full operation has been considered.

By applying the proposed mitigation measures the results of the noise and vibration impact assessment indicate that:

- Noise from the proposed ISWMS operations is considered to have a low or minor impact.
- Noise from ISWMS-generated road traffic is considered to have a negligible impact.
- Noise from construction activities has a minor or negligible impact.
- Vibration from construction activities will not have a significant impact.
- Noise from construction traffic along the defined haul route will not have a significant impact overall.
- No significant residual impact from noise and vibration is expected when proposed mitigation measures are implemented.

A minor adverse noise effect occurs with the Energy Recovery Facility's steam purging event during commissioning, which happens the first time the plant puts forth energy when it comes online. A one-time event during its lifecycle, this steam purge process is intended to "shock" and remove all internal piping corrosion and scale deposits between the boiler and steam turbine inlet. This event occurs during the day and is not representative of the long-term noise from the Facility.

4.8 Traffic and transport

The project team completed a Traffic Statement as part of the Environmental Impact Assessment process to assess the likely impacts of the ISWMS development on the surrounding road network. The Traffic Statement sets out the existing situation, presenting the proposed development and determining what impact, if any, the ISWMS Site-generated traffic will have on the surrounding road network.

The proposed ISWMS Site is located at the north end of Seymour Road in the Industrial Park area of George Town. The Site is accessible only via Seymour Road.

The Study Area for this impact assessment consists of an area stretching from the north end of Seymour Road at the entrance to the Site, south along Seymour Road, and encompasses the intersection of Seymour Road with North Sound Road. The Study Area also extends east to the intersection of North Sound Road and Dorcy Drive and west to the approach to the 'Bank of Butterfield' roundabout, where North Sound Road intersects with the Esterley Tibbetts Highway and Godfrey Nixon Way.

DRAFT

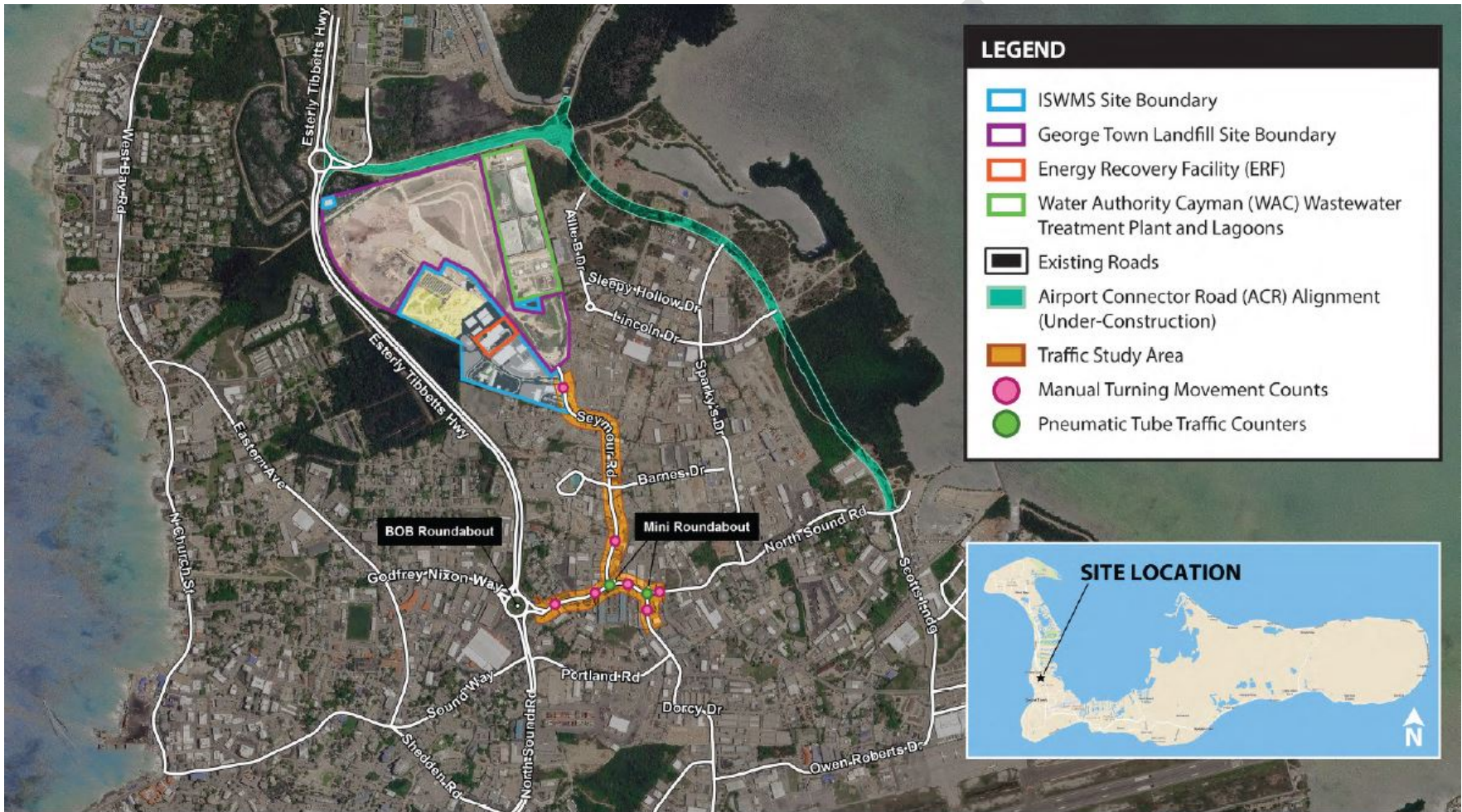


Figure 4.7 Study Area Location Plan Showing Existing Road Network

4.8.1 Baseline conditions and existing traffic volumes

Data on the existing traffic flows on the surrounding road network within the Study Area was gathered via automatic traffic counters and counts of turning movements. Existing traffic data was also provided, mainly from a 2017 island-wide traffic count study. Such traffic flow data analysed three main intersections on the surrounding road network individually showing the resulting level of congestion for each approach/lane of each intersection during both the morning and evening peak periods.

The results showed that peak traffic flows associated with the existing George Town Landfill occur mostly outside the peak traffic periods of the surrounding intersections/roads. The North Sound Road network in the vicinity of the proposed ISWMS Site is currently operating beyond capacity, with much of North Sound Road and approaches to the Bank of Butterfield roundabout experiencing a high level of congestion.

A detailed assessment of the traffic- and road-related aspects of the proposed development was undertaken, including expected trip generations due to the ISWMS. A capacity assessment was provided for the three intersections within the Study Area that could be impacted by the proposed development and future traffic flows within the Study Area were calculated. Impacts to the Study Area's road network during the ISWMS's construction are also reported.

4.8.2 Impacts and effects

The major assumptions that underpin the findings of the Traffic Statement include:

- ISWMS Site operations are expected to be similar to the existing George Town Landfill operations, with a slight increase in staff.
- Trip generation by the ISWMS is expected to be in line with the trips currently generated by the landfill.
- Trip distribution to and from the ISWMS is expected to be similar to existing trip distribution at the landfill.

The major findings of the Traffic Statement include:

- Peak traffic flows associated with the landfill occur mostly outside the peak traffic periods of the surrounding intersections and roads. Any temporary fluctuations in traffic flow at the landfill's or ISWMS's entrance will not impact peak hour operation of the rest of the road network.
- The North Sound Road network, in the vicinity of the proposed ISWMS Site, is currently operating beyond capacity, with much of North Sound Road and the approaches to the Bank of Butterfield roundabout experiencing a forced, or breakdown flow level of service.
- The intersections within the Study Area will experience a further deterioration in service in the future due to projected traffic growth for Grand Cayman.
- The opening of the ISWMS is not expected to have a direct impact on the surrounding road network, as traffic associated with the Site will be in line with existing traffic flows associated with the landfill.
- The construction of the ISWMS will cause some minor impacts on the surrounding road network during peak periods.
- Construction delivery traffic will cause a very low impact on the surrounding road network.

The impact assessment for traffic and transportation within the Study Area concludes that the impacts are expected to be negligible to moderate, and therefore not considered to be significant.

4.9 Socio-economics

The activities proposed during the construction and operation of the ISWMS may affect people's way of life, their community, economic activity, and culture. For example, there may be increased traffic and noise during the construction and operation of the Project, but there may also be job opportunities and benefits to local businesses (i.e., business supply needs, food).

4.9.1 Baseline data and existing environment

A baseline of the existing social and economic conditions was established for the local (District of George Town) and regional (Cayman Islands) Study Area. Existing conditions were determined through a review of:

- Local population census data
- Government planning documents
- International financial institutions' statistics
- Non-governmental organizations (NGOs) and industry reports
- Other assessment reports prepared for projects in proximity to the Study Area
- GIS mapping
- Information gathered through consultation with stakeholders (i.e., government, interested companies)

The main elements of the socio-economic investigation include the following demographic profile information:

- Demographic profile
- Employment and economy
- Education
- Housing and accommodation
- Natural environment
- Community health and wellbeing
- Access and connectivity
- Access to services and infrastructure

Specific examples of these elements are population, age and sex profile, labor force, police and fire service, cultural diversity, health, and income.

Key findings of research include considerable population growth over the last decade, a high foreign labor force and migrant population, and the construction industry holding the largest employing industry in the Cayman Islands making up over 15 percent of the total labor force.

4.9.2 Impacts and effects

Construction

The key potential positive socio-economic impacts to occur during construction are primarily related to an increase in employment opportunities for Cayman residents, procurement opportunities for businesses to supply goods and services, and a minor increase in revenue for local businesses due to construction workers purchasing meals and other services.

The potential temporary negative socio-economic impacts that may occur during construction are:

- A reduced sense of desirability or pleasantness (amenity) for some residents, businesses and community facilities in close proximity to construction activities.
- Minor disruptions to traffic conditions, resulting in delays and the potential for increased travel times for people travelling in the local and regional area, including local community members and regional road users.

Operation

The key socio-economic benefits of the Project during operation are primarily related to the regional economic benefits associated with the development of a new, technologically advanced method of dealing with solid waste, industry and the diversification of the economy. In particular, the Project has the potential for capacity building and upskilling of the existing workforce and provides opportunities for new business generation to support its operations in Cayman as ERF technology is a new industry for the region.

Additionally, due to the nature of the Facility, involving the production of green energy, the recovery and reusing of materials and the overall improvements to current waste management practices in Cayman, residents may experience a sense of community pride associated with the contribution to the circular economy. This may in turn support the tourism industry to achieve its aspirations for sustainable and eco-tourism practices as a large waste contributor on the Island.

The key negative socio-economic impacts during operation are related to the perception of health and safety risk associated with the operation of the Project and potential changes to local amenity for some residents and businesses in close proximity to the ISWMS Site due to changes in air quality, noise and visual amenity.

The socio-economic opportunities and impacts identified and assessed in this report would be managed and mitigated, and opportunities enhanced through a range of recommended measures, which include preparation and implementation of the following plans:

- Employment and skills plan
- Consultation framework
- Community Liaison Plan
- Enquires and complaints plan
- Procurement plan

4.10 Cumulative effects

Two types of assessments for cumulative effects were considered in the Environmental Impact Assessment: inter-project effects and inter-related effects.

4.10.1 Inter-project effects

For each environmental topic considered in the Environmental Impact Assessment, an evaluation was undertaken for how environmental effects resulting from the proposed ISWMS development could combine with similar effects that would be generated by other committed or proposed developments. No significant cumulative effects were identified in relation to the ISWMS development and other committed or proposed developments.

4.10.2 Inter-related effects

The assessment of inter-related effects considers whether any effects from an individual environmental topic that result from the proposed development could combine to create effects that are greater than the sum of these individual effects on a given receptor. No significant inter-related cumulative effects were identified for the ISWMS Project.

5. Stakeholder consultation

The ISWMS Project is a public-focused Project that will allow residents of the Cayman Islands to engage with solid waste management in new and innovative ways for many years to come. To be successful, implementation of the ISWMS requires a commitment to open dialogue and a communications campaign that reaches multiple stakeholders.

This commitment has been demonstrated by the community engagement work undertaken by the Cayman Islands Government before beginning the Environmental Impact Assessment. This work established the ISWMS's core policies and helped ensure an early dialogue around the need for non-landfill-based waste management solutions.

5.1.1 Communications

As part of its communications strategy, the proponent has developed a public-facing website, (regen.ky) that outlines a description of the Project, associated visuals, facilities, local impacts, energy recovery and recycling processes, and frequently asked questions. Users and interested parties can subscribe to an e-newsletter to receive project updates as they occur and follow ReGen's social media accounts, including:

- Facebook: <https://www.facebook.com/regencyayman>
- Instagram: https://www.instagram.com/regen_cayman/
- Twitter: <https://twitter.com/regencyayman>
- LinkedIn: <https://www.linkedin.com/company/regencyayman/>
- YouTube: <https://www.youtube.com/@regencyayman9032>

The overall communication strategy aims to provide effective communication channels, enable information to be circulated, allow for informal and formal discussion, and to provide a mechanism for service improvement, dispute resolution, communication, and education.

5.1.2 Public consultation

There are two points of mandatory public consultation that occur during an Environmental Impact Assessment:

- A review and comment period for the Draft Terms of Reference
- A review and comment period for the Draft Environmental Statement

A total of nine comments were received from members of the public during the Terms of Reference public consultation process.

Consultation on the Environmental Statement will be undertaken when the Draft Environmental Statement is completed in order to consider representations, valid views and concerns from the public and key stakeholder groups. This consultation will include, at a minimum:

- The publication of the Draft Environmental Statement or a link to the statement on the Department of Environment's website for a period of 21 consecutive days.
- Notification of the publication of the Draft Environmental Statement, and a public meeting in the local press on two separate occasions within 10 days before the statement's publication.
- Public meetings at John Gray Memorial Hall (West Bay), Harquail Theatre (George Town), and Mary Miller Hall, (George Town East) to present the Draft Environmental Statement. Meetings will be held at least seven days prior to the end of the consultation period.

The proponent will respond to, and address, representations received during consultation on the Draft Environmental Statement. These representations and responses will be appended to the Final Environmental Statement.



ghd.com

→ **The Power of Commitment**