



CAYMAN PORT

Strategic Outline Case

Cargo Port Development Project

This document provides information to relevant stakeholders to inform deliberations concerning a proposed Cargo Port Development Project

Cargo Port Development Project Steering Committee and PACI Board of Directors

February 2022



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PORT AUTHORITY OF THE CAYMAN ISLANDS STRATEGIC OUTLINE CASE

Project Title: Cargo Port Development Project

Sponsoring Ministry: Ministry of Tourism and Transport

Author: Cruise and Security Manager, Mr. Joseph Woods

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Section 1: Overview of the Strategic Aim – What the Strategic Outline seeks to inform

This strategic plan will inform on the ability of the Port Authority of the Cayman Islands (PACI's) infrastructure to meet immediate and future demands and growth in cargo as the Cayman Islands economy and population continues to expand, as well as to explore other opportunities that take it beyond its current abilities and capacity and allow it to compete on the international market.

The Cayman Islands is a consumer country with a consumer-based economy. It produces very little and is dependent on the outside world for practically all of the goods and materials needed to sustain its people and economy; from groceries and household goods, to vehicles for transportation and heavy industry, to construction materials, including aggregate and cement, as well as fuel, even though there are two fuel companies with their own ship to shore facilities.

The Port of George Town was constructed back in 1976 with the primary purpose of facilitating the islands' needs, growth and development. It started as a cargo port, but it also became a major port of call for the cruising industry, with passengers coming ashore via tenders due to no berthing facilities and very shallow water of the harbour.

This strategic plan will look at where it currently stands and consider its options for the future.



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Section 2: Overview of PACI's Infrastructure

Today, the Port of George Town is a multi-purpose port engaged in cruise operations during the daytime and cargo operations at night. It serves as the main port of entry for at least 95% of all of the imports to the Cayman Islands. The original cargo dock was constructed in 1975 with a small enhancement occurring in 2005.

The Port and its infrastructure are managed by the Port Authority of the Cayman Islands, a statutory authority wholly owned by the Cayman Islands Government, which was formed in 1977.

The Port of George Town is located on approximately 5.95 acres of land, with 3.6 acres dedicated to cargo operations and 2.35 acres dedicated to cruise operations. The cargo portion consists of one LoLo pier and one RoRo pier, with the container staging area of approximately one acre also serving as the transportation staging area during the daytime for cruise operations.

The LoLo pier is known as the South Cargo pier. It is 440 feet long. It is a shallow draft berth due to the fact that the draft on the inner end is only 12 feet and on the outer end it is 22 feet. The RoRo pier is known as the North pier, or North RoRo pier. It is only 200 feet long and is also a shallow draft berth, with a water depth of 18 feet on the inner end and 22 feet on the outer end.

PACI has 2 Manitowoc construction cranes that have been modified for discharging ships. Their reach limits them to vessels with containers stacked only 6 across. It also has a fleet of 8 new TICO trucks and 8 chassis to transport containers between the dock and its inland facility. It also has a fleet of head-handlers and forklifts for cargo and container handling, along with two Rubber Tire Gantry Cranes to allow for greater efficiencies in container storage.

The first cruise tender facility was constructed in 1988, followed by a second in 1989. In 2005, the Royal Watler Cruise terminal was opened.



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In 1992, the Berkley Bush Cargo Distribution Centre was opened. It provided far greater storage and handling capacity for containers and LCL cargo than could be handled at the dock, as well as making it easier to facilitate both cargo and cruise operations simultaneously in a much safer environment. The site is a total of approximately 14 acres. The cargo warehouse is 25,500 square feet with 22,500 square feet dedicated to storage space and the balance is office space. Approximately 1.2 acres is dedicated to storage for imported vehicles, 2.25 acres to container storage for approximately 1200 containers, 0.8 of an acre for flat racks.



The Port Authority's management structure consists of a Board of Directors with a Port Director as CEO. There are three main divisions; Operations (Cargo & Cruise), Finance (and Facilities)



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and Administration (and Support Services) under which its 150 staff in Grand Cayman and 12 staff on Cayman Brac are deployed.

PACI has three sources of revenue; cargo, cruise and rental property. Cargo generates approximately \$18 million in revenue per year; cruise approximately \$5 million and rental another \$1 million. This diversity of revenue is important for the sustainability and profitability of PACI, for while cruise on its own would produce a profit, cargo operations barely breaks even, unless the volume is very near to the peak capacity. The revenues from cruise operations is what enables PACI to carry out its capital projects, improve its infrastructure and fund new equipment to maintain a reliable and efficient cargo operation and was going to be the basis of funding the proposed new cruise and cargo berthing facility. There is no ability to further diversify PACI's revenue streams by tapping into the transshipment or free-trade zone markets, because the berth is a shallow draft berth, the cranes have limited reach, the pier is too narrow, the storage space is too small and currently serving dual purposes, the berthing availability is limited, cargo has to be trucked and stored offsite, and cargo vessels can only be discharged at night when there are no cruise ships in port.

In addition to the Port Authority's main mandate of facilitating commerce in the form of cargo and cruise shipping, it is also charged with some statutory obligations such as the maintenance of aids to navigation and navigational markers around the three islands, receiver of wrecks functions and regulation of safety equipment with respect to local vessels. It also has to comply with and/or facilitate the compliance with, quite a range of IMO instruments and requirements.

Section 3: Utilization of Infrastructure and Functionality

The Port Authority is operational twenty four hours per day, every day of the year. During the daytime from 6am to 6pm, it operates as a cruise ship port of call. During the nighttime from 6pm to 5am, it operates as a cargo port.

In 2018, there were 636 cruise calls and 1.92 million passengers facilitated through the Port's facilities. In 2019, there were 601 cruise calls and 1.8 million passengers. Cruise calls occur practically every day of the week, especially during the months of November to March each year. Thereafter the number of vessel calls decline, but they can still be spread throughout the week, including weekends. The three cruise facilities, Royal Watler Cruise Terminal, North Terminal



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and South Terminal are used continuously throughout the year along with the South Cargo Pier when there are four ships requiring the use of ADA compliant gangways.

Cargo operations can only occur at nighttime, between 6pm and 5am. It cannot occur daytime for two reasons; one is that the same space needed to store containers is also needed as a staging area for transportation serving the cruise industry, as none of the three cruise terminals have dedicated transportation staging area, with the exception of the North Terminal and that only has space for about 12 vehicles. There are about 160 vehicles serving the cruise industry every day and as it is a very time sensitive business, the vehicles have to be immediately available. The second reason is that of safety; with thousands of tourists, it is a huge liability to be operating heavy equipment amongst them. The one acre of container staging space on the dock has to be cleared before sunrise each day as the same space is required for staging transportation during cruise operations in the daytime.

In 2018, there were a total of 403 cargo vessel calls and in 2019 there were a total of 401. There are two ship calls per week each from Tropical Shipping out of Palm Beach and Hyde Shipping out of Port Everglades. Seaboard has one ship call per week from Jamaica utilizing its roll on – roll off vessel. There is a call on Sunday, one on Wednesday, two on Thursday (which often spills over into Friday) and one on Saturday. The inter-island barge loads on Tuesday and discharges empties back in Grand Cayman on Friday. This leaves two nights of availability on the South Cargo pier.

The Berkley Bush Cargo Distribution Centre on Portland Road is 29 years old. It is the storage facility for general cargo, LCL cargo, vehicles, flat racks and containers awaiting collection by importers and a storage facility for outgoing empty containers and cargo for export. During the daytime, vehicles, flat racks, dedicated containers and LCL cargo can be collected. At nighttime, only dedicated containers and flat racks can be collected. The warehouse which stores the LCL cargo pending collection by the importer, has four bays which would allow four containers to be discharged simultaneously, but there is only staffing to operate two at a time. We are presently handling anywhere between 30 and 50 LCL containers per week, but because we can discharge containers at a faster rate than the cargo is being collected, two teams are sufficient as we sometimes have to halt the discharge of LCL containers until enough cargo has been collected to free up more space to allow the resumption of discharging of more containers. To handle a larger volume would entail expanding the warehouse and the capacity to discharge and deliver cargo faster. On October 19, 2020, staff at CDC discharged 11 LCL containers, delivered 518 pieces of



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LCL cargo and delivered 51 dedicated containers to trucking companies for delivery to importers. On October 26, 2020, staff at CDC delivered 575 pieces of LCL cargo, discharged 13 LCL containers, with 17 more LCL containers awaiting discharge and delivered 49 loaded containers to truckers for delivery to importers.

Section 4: Demand, Growth Capability, Limitations and Constraints

Forecasting the demand and growth in cargo is not simple, straightforward and easy, as it is influenced by many factors. Population growth, affluence of the population, the state of the economy locally and worldwide, infrastructure development, the stage and vibrancy of the local construction industry, the volume of both stayover and cruise visitors are among the leading influences of the demand and growth for cargo importation. But it is inevitable that as the economy and population of the Cayman Islands continues to grow, so will the volume of cargo.

To put it into perspective and gain an understanding of the growth likely in a period of ten years, it is important to take a historical look at the population growth and compare it with the growth in cargo over the same period.

In 2010, Cayman's population stood at 55,036; one year later it stood at 55,517. In 2015, the population stood at 60,413. In 2019, the population was estimated at 69,914. That is an increase of approximately 5,000 persons every five years.

In 2011, the total amount of containerized cargo imported was 180,882 tons in 21,614 TEUs. In 2015, the total amount was 203,018 tons in 26,213 TEUs. In 2019, the amount was 278,385 tons in 32,836 TEUs.

In 2011, the amount of cement and aggregate imported was 26,559 tons and 143,492 tons respectively. In 2015, the amount was 37,353 tons and 173,394 tons respectively. In 2019, the figures were 57,595 and 378,615 tons respectively. The total amount of cargo imported in 2011 was 353,704 tons. In 2015, the total amount of cargo imported was 426,835 tons and in 2019, the total amount of cargo imported was 722,616 tons.

There was a 9% increase in the population between 2011 and 2015, but a 25% increase in the number of TEUs, a 12% increase in the tonnage of containerized cargo, a 41% increase in cement, a 21% increase in aggregate and an overall increase in the total amount of cargo imported of 21%.



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For every increase of 5,000 in the population, the trend indicates that containerized cargo increases by an average of 5,500 TEUs. That would mean that when the population reaches 100,000, we can expect to be importing an additional 33,000 TEUs per year, for a total of approximately 65,836 TEUs per year. That is approximately 80% of the 82,836 TEU capacity of the vessels currently calling Cayman.

According to the Planning Department's minutes posted on its website, planning approval granted for property construction for 2020 totaled in the hundreds of millions of dollars. That will last several years into the future. A recent article in the Cayman Compass indicated that based on information from the Economics and Statistics Office, Cayman's population will grow to between 100,000 and 120,000 in ten years. However, the vibrant stayover and cruise tourism industry that came to a halt in March 2020 will likely experience a slow and gradual recovery over the next two to five years. So, in approximately ten years, we will be nearing the capacity of the cargo vessels that currently call here.

The following is a list of container ships currently calling, the age of the vessels, their capacity their drafts, the average volume of TEUs they bring on a typical voyage and the extra capacity available for future growth.

Tropic Lure was built in 1983 (37 years old) and has a capacity of 176 TEUs with a draft of 4m. It typically brings around 96 TEUs each voyage. The available capacity is 80 TEUs.

Tropic Mist was built in 1983 (37 years old) and has a capacity of 176 TEUs with a draft of 4.1m. It brings around 61 TEUs on a typical voyage. The available capacity is 115 TEUs.

Caribe Legend was built in 1993 (27 years old) and has a capacity of 515 TEUs with a draft of 4.8m. It typically brings 289 TEUs per voyage. The available capacity is 226 TEUs. However, while this vessel has a lot of extra capacity, it has a draft problem. On many of its current voyages under average load, it cannot fully berth all the way along the pier due to the draft. Containers have to be discharged from its bow to lighten it before it is able to be moved further up the pier to allow both cranes to discharge the vessel. Fully loaded, its draft will exceed the water depth at the pier.

Caribe Navigator was built in 1995 (25 years old) and has a capacity of 326 TEUs with a draft of 3.2m. It brings around 136 TEUs each voyage. The available capacity is 190 TEUs.



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Caribe Mariner was built in 1995 (25 years old) and has a capacity of 340 TEUs with a draft of 3.6m. It brings around 177 TEUs on a typical voyage. The available capacity is 163 TEUs. However, while this vessel too has a lot of extra capacity, it has a draft problem. Fully loaded, its draft will be equal to the draft at the pier, which will reduce its ability to completely berth.

Seaboard Sun was built in 1991 (29 years old) and has a capacity of 400 TEUs with a draft of 17 feet. It brings 148 TEUs and approximately 50 vehicles on a typical voyage. The available capacity is 80 TEUs.

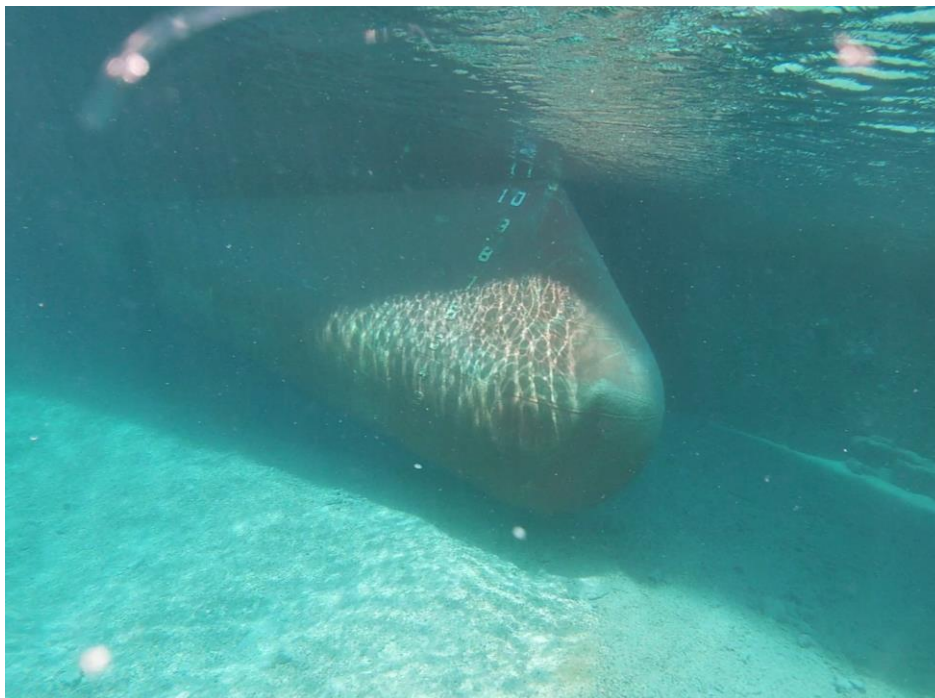
But while the ships that serve us will be nearing their capacity to meet Cayman's needs, they will also be nearing the end of their useful life in that they will range in age from 35 to 47 years and their companies will no doubt be looking to replace them with newer and larger vessels. Those vessels however come with deeper drafts. For example, Tropical newer vessels like the Tropic Carib and Tropic Unity that were built in 2001 have a draft of 7m and carries 973 TEUs.

But the Port's infrastructure and cargo handling equipment has limitations that will challenge its ability to handle any significant increase in cargo. Firstly, the length and draft of the cargo pier. Secondly, the reach of its two cranes. Thirdly, the size of its container storage area. Fourthly, its trucking capacity. Fifthly, its warehouse capacity. Sixthly, its LCL discharge capacity. Seventhly, its customer service capacity in revenue collection and in cargo delivery.

The cargo berth is a single pier. The South side is 440 feet long and the north side is 200 feet long. The draft along the south side of the berth range from 3.2m (12 feet) on the inner end, to 6.5m (22) feet on the outer end, while the draft on the north side ranges from 5.5m (18 ft) to 6.5m (22ft). There is also a shallow bar of rock about midway along the south cargo pier and 62 feet away from the face of the berth. These features limit the length, width and draft and ultimately, the capacity of the vessels that can berth at the pier.



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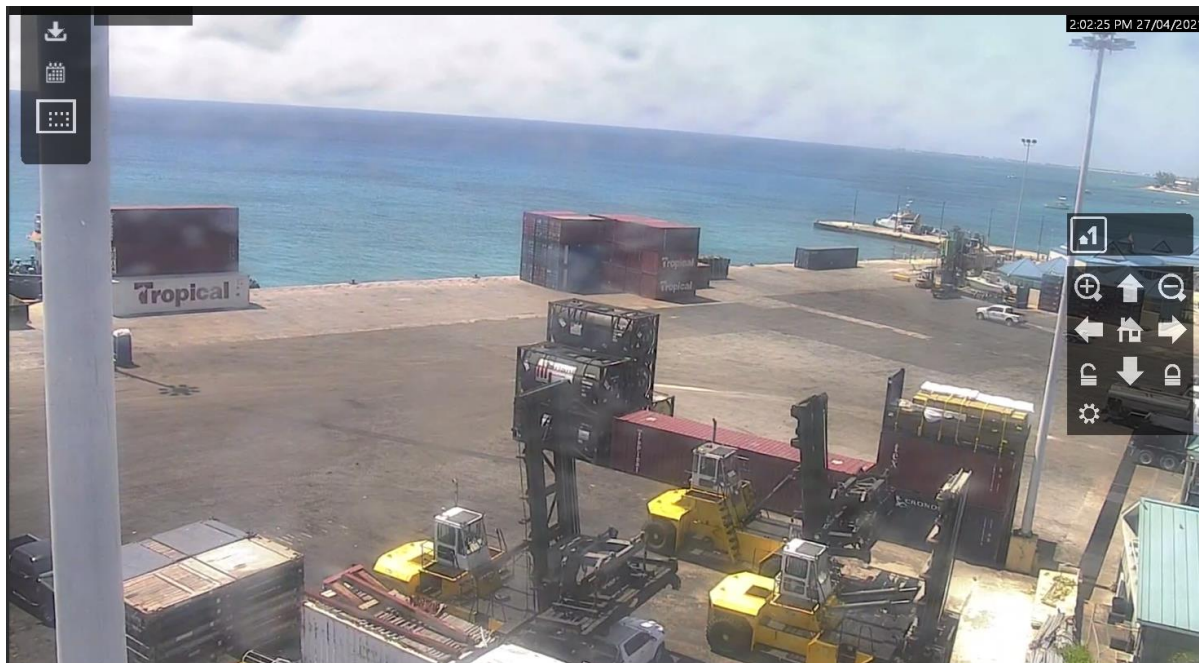
PACI's two cranes have a reach of 6 across, so they are unable and incapable of lifting containers from vessels that store containers 8 or 10 across.





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The one acre of container storage area on the port is barely adequate for the discharging of one cargo ship presently, let alone two ships simultaneously. One acre of space can accommodate approximately 200 TEUs of stacked containers, or 80 TEUs of RoRo units on chassis. To handle more TEUs will require more staging space. This is somewhat alleviated because we are trucking containers continuously from the Port to CDC each night during the discharge.



Our trucking capacity with 8 trucks running and no unforeseen delays, is between 100 to 128 containers per night each way. With the number of truckers and staffing that we currently have engaged, we can truck between 96 and 128 containers per night, or approximately 33,000 per year. If the maximum number of containers that we could transport per night with our 8 trucks running is carried out each night, then we could transport around 43,000 containers per year.

The warehouse on Portland Road is now at capacity with the current weekly volume of approximately 50 LCL containers and even then, sometimes not all can be discharged if collections



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do not flow rapidly. Doubling the volume of LCL cargo will create significant delays in the discharge of LCL containers without additional warehouse space.

The two RTGs that serve our container storage area at CDC can only serve two trucks at a time. Each is receiving approximately 25 containers and delivering approximately 30 containers per day; a total of approximately 60 container deliveries per day. This is barely adequate and it depends on the machine working constantly and consistently around the clock, with very little tolerance for downtime.





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More personnel will also be required to maintain the present efficiency that customers have become accustomed to.

Section 5: Options for PACI and Revenue Streams

To accommodate growth beyond the available capacity will require:

- 1) Wider, shallow draft vessels, or;
 - 2) Longer shallow draft vessels, or;
 - 3) Longer, wider and deeper draft vessels;
 - 4) A longer cargo berth with deeper, equal depth water along the full length of the pier;
 - 5) Newer cranes with further reach capability;
 - 6) An expanded container staging and storage area on the dock;
 - 7) Additional trucks and chassis to move containers between the dock and CDC.
 - 8) An expanded warehouse capacity;
 - 9) Additional RTGs;
 - 10) Additional staffing;
 - 11) An expanded revenue base.
-
- 1) To accommodate wider, shallow draft vessels means removing a hard rock that is located 62 feet from the center of the south cargo pier in 17 feet of water. Additionally, cranes with a greater reach than our current cranes will be needed.
 - 2) To accommodate longer shallow draft vessels will require an extension of the current cargo pier, otherwise the cranes will still not be able to reach and discharge some of its containers.
 - 3) To accommodate longer, wider and deeper draft vessels will require an extension to the pier, with deeper, equal depth water along the full length of the pier, as well as newer, cranes with a greater reach capability.
 - 4) Once we are handling in excess of 300 TEUs, per ship, we need additional dock space to stage and store containers.
 - 5) An expanded fleet of truck to move more containers each night between the dock and CDC.
 - 6) The warehouse at CDC is at capacity with the current volume of cargo. Additional cargo will require a larger warehouse with greater capability to discharge containers and deliver cargo to importers.
 - 7) Two RTGs with the capacity to deliver a total of 50 to 60 containers per day will just not be sufficient. When one factors in maintenance and breakdowns as the equipment grows



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older, it is easy to see that PACI will require a minimum of two more RTGs to increase its efficiency and capacity to deliver containers.

- 8) Additional staffing will be required to operate the additional trucks, discharge the containers and deliver cargo to customers.
- 9) An expanded revenue base will be required to fund or finance the additional capital acquisitions and to fund the additional labour cost while still turning a profit for maintenance and future needs.

To achieve all of this PACI has two options; expand its current facilities and/or construct a completely brand new deep water cargo facility that is large enough to accommodate Cayman's needs for the next 50 to 100 years.



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Expanding the Current Facility



The current facility can only be expanded westward into the sea. Three and a quarter acres could be gained by filling in the area between the north side of the cargo dock and the south side of Royal Watler cruise tender pier. The cargo pier could be expanded 300 feet more to provide a total of 700 feet of berthing space on the south side of it and 300 feet on the north side of it. Then, the



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seabed along the face of both sides out to 150 feet, could be excavated to make the water depth along the whole length of the pier the same as the water depth at the outer end of the pier. That would provide berthing for vessels with a draft up to 25 feet, which is more than sufficient for Tropical 973 TEU vessels and more container capacity than Cayman needs for the next 20 to 30 years. In this option, the cruise industry would be capped at the current volume and size ships, as it normally takes 3+ hours at a rate of approximately 1,250 persons per hour, to disembark a 4,500 to 5,000 passenger capacity cruise ship. The only improvement to the cruise side would be the additional parking space gained for the staging of transportation vehicles when the space between the two piers is filled. PACI would have to acquire new cranes with greater reach capability than its current 20 plus year old equipment. In addition, it would have to expand its fleet of trucks and chassis to move containers between the port and CDC from 8 to 12, enough to allow for the transport of 192 TEUs per night. The container storage at CDC is sufficient, but two additional RTGs would be needed to handle the increased number of containers. In addition to that, a bigger warehouse would be needed to handle the larger volume of LCL cargo. However, the warehouse cannot be expanded in any direction currently and is blocking any further expansion of the RTG container storage area. If this first option is chosen, it would be in PACI's interest to acquire some of the roadside properties along Portland Road for its new warehouse and Mechanic shop. This option would limit PACI's revenue stream to its present three sources; cargo, cruise and property leases and would still not allow PACI to expand into the free trade or transshipment business, because the vessels engaged on that are drawing in excess of 25 feet. In addition, having to move containers offsite from the Port and back again is an added cost that would make PACI totally uncompetitive.



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The second option would be to reserve the current port site for cruise operations and construct a new and modern deep water cargo port at another location on the island.

This would allow for a reconfiguration of the cruise and tendering operation to offer a much better experience for cruise guest and fit in with the revitalization vision for George Town.

A brand new deep water (50ft draft) cargo port elsewhere is a major undertaking that would take in excess of a decade to complete. Located in the right area with large amounts of property for the storage of containers and easy access to the highway would eliminate the need for the Cargo Distribution Centre as well as a reduced need for trucks and chassis needed to move containers



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between sites. The SOL, Rubis and Home Gas tank farms could also be moved to the new cargo port, eliminating the risk to the residential areas in which they are currently located. A mega yacht marina could also form part the new port, providing a much needed all weather facility. In addition to all of this, it would also enable Cayman to compete for the free trade and transshipment business that Panama and Jamaica currently enjoy. This option would enable PACI to expand its revenue streams beyond its traditional sources of cargo, cruise and property leases to include fuel, mega yachts, free-trade and transshipment sources along with the sale of excess aggregate from the excavation of the basin after the dock yard and reserved areas have been filled to the required level.

Possible Locations for A New Facility

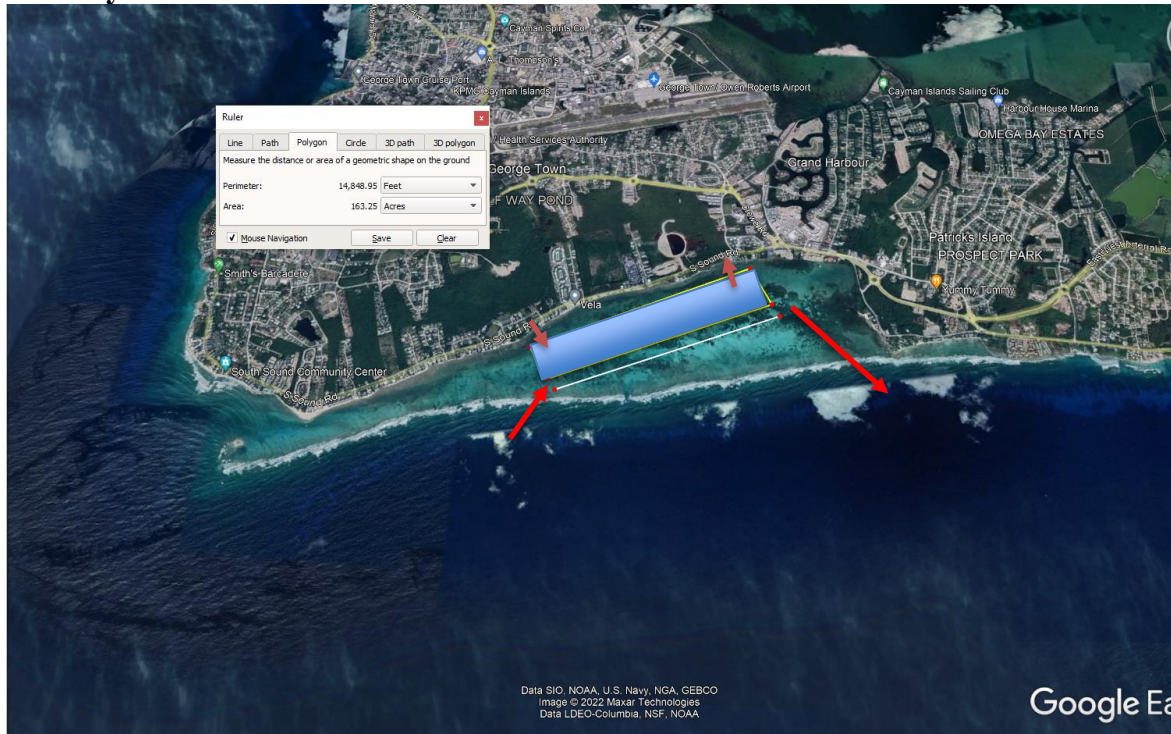
Some of the locations that could be used for a New Cargo Port Facility are as follows:

- 1) Red Bay/South Sound;
- 2) North Sound;
- 3) East End Sound;
- 4) Frank Sound;
- 5) Breakers (site of quarries)



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Red Bay/South Sound



This would entail cutting a channel through the reef on one end and an exit on the other end as well as dredging the basin for the berths between the entrance and the exit. Ships would enter on one side and exit through the other, eliminating the need for turning vessels around in the basin and possible collisions between vessels entering and exiting the channel. The fill generated would fill the approximately 163 acres of land upon which a terminal could be built to accommodate containerized general cargo, aggregate and a fuel farm. Future expansion is limited as it would mean expanding to the north where there are already a lot of expensive homes and apartments. This would also be the only way of adding any form of Mega Yacht Marina. South Sound is a quiet residential community and the noise pollution from a port may not be an acceptable factor, along with the risk of a fire or explosion from a fuel farm. These homes and condos would have to be acquired in order to have sufficient space for further expansion, or to build a Mega Yacht Marina. The cost of this would significantly add to the cost of the project. In addition to that, South Sound is now a Marine Reserve and building a port there would result in the complete loss

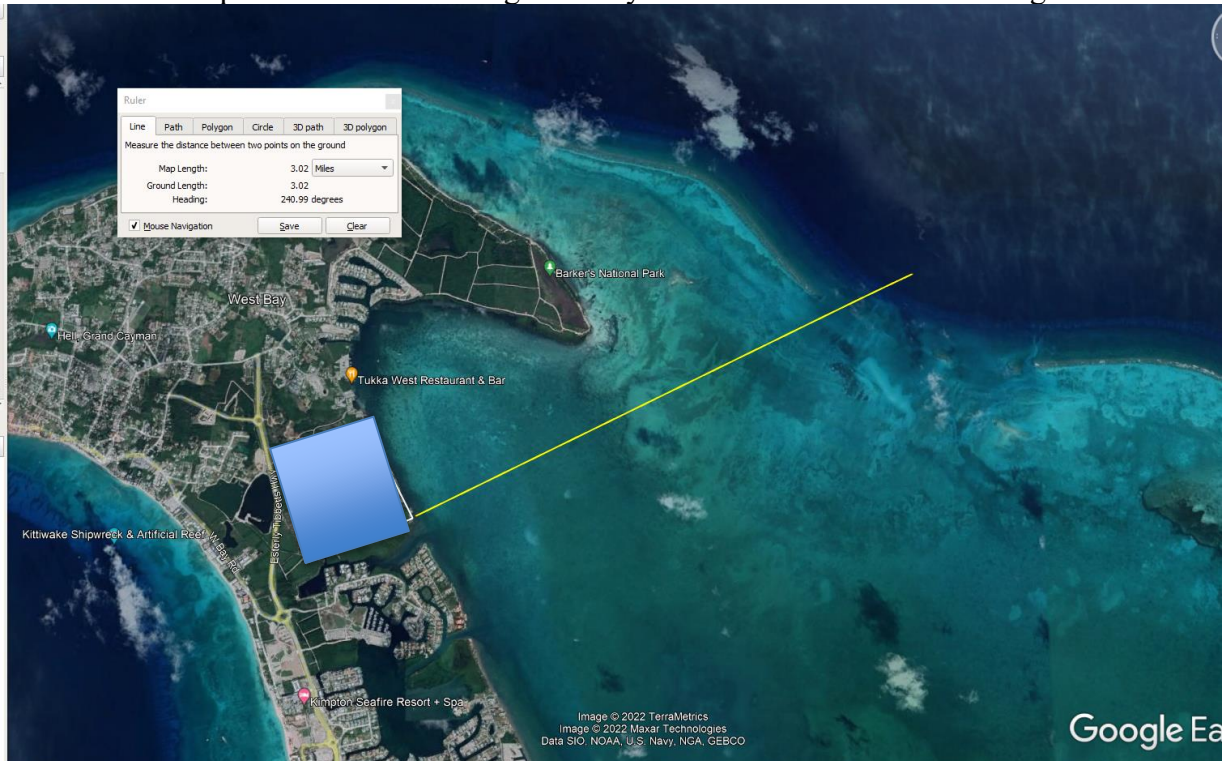


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of that sanctuary for marine life. Public buy-in would not likely be forthcoming and that would make it difficult, if not impossible to achieve the project. The hurricane Ivan experience has taught us that a Port in South Sound would likely be decimated in a category 5 hurricane.

The North Sound

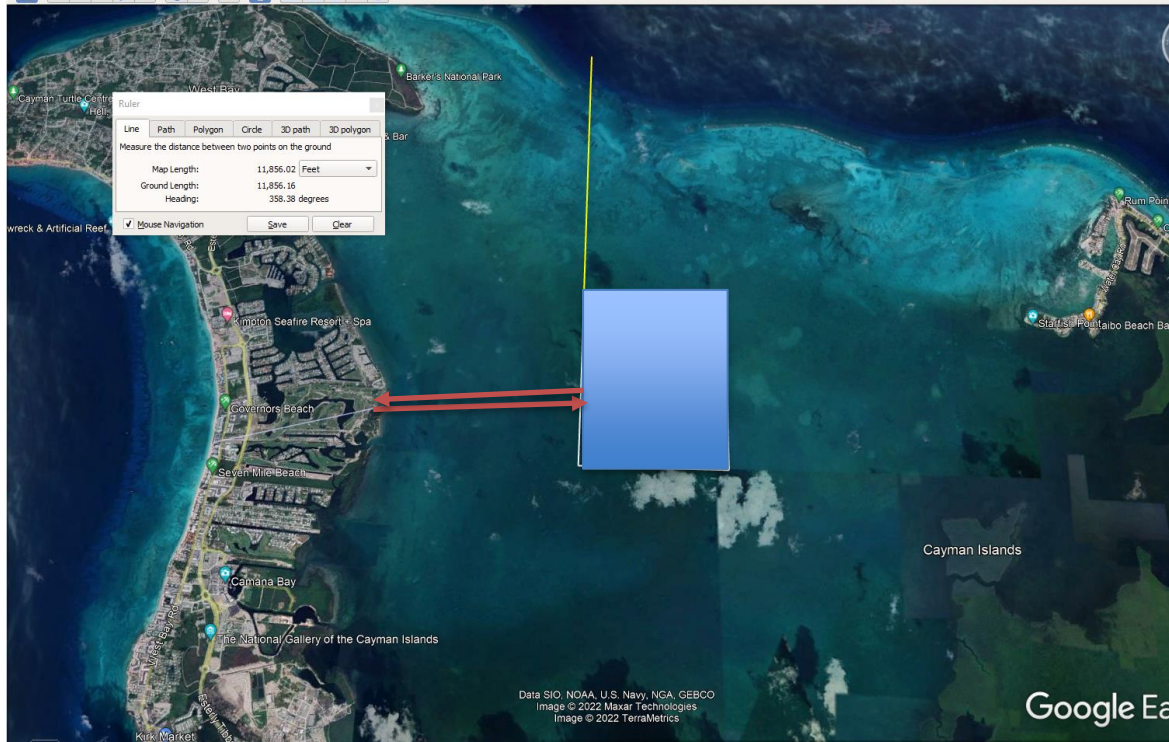
North Sound – Option 1 – Onshore Cargo Facility between Safe Haven and Morgan’s Harbour





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North Sound – Option 2 – Artificial Island for Cargo Terminal



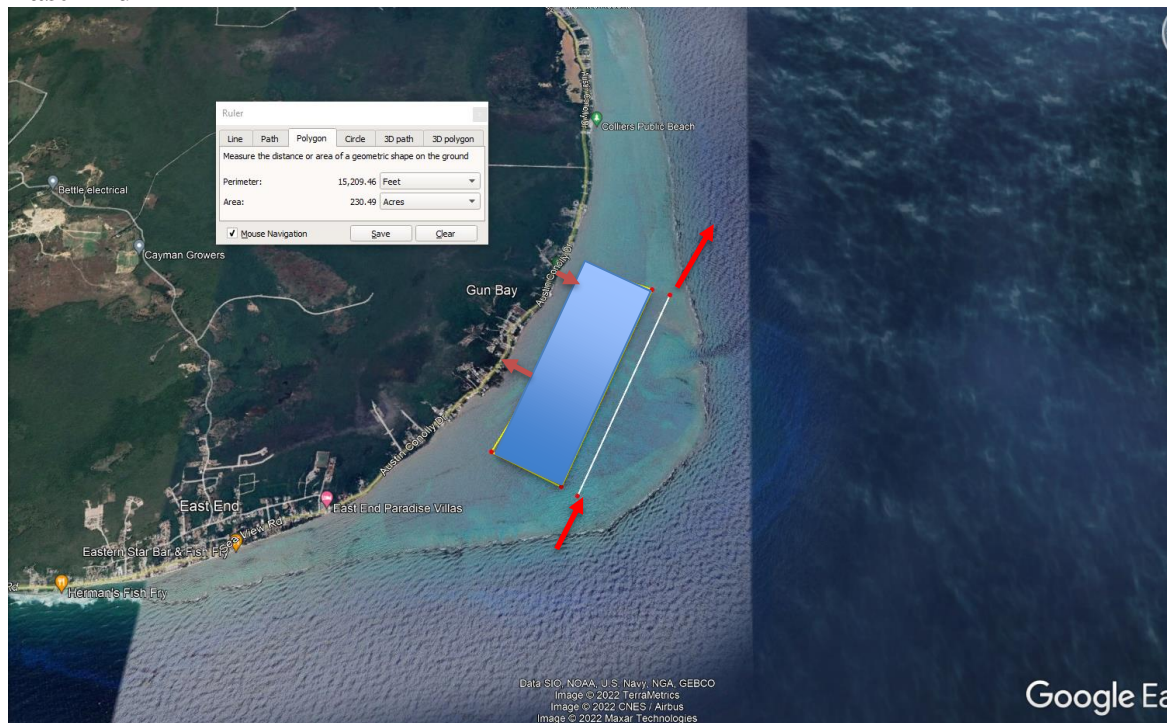
The North Sound is an option that would offer a sheltered harbour, but it would mean dredging a three mile channel through the reef to create a port onshore between Safehaven and Morgan's Harbour, or to an artificial island constructed in the middle of the North Sound to house the facility's cargo, aggregate and fuel farm. It would also require building either a causeway, or a solid-fill road to link the artificial island back to the mainland. This large amount of dredging, filling to create the artificial islands and the feeder road would no doubt cause a lot of environmental and ecological damage. The popular fishing spot known as "Suck Fish Hole" would be destroyed along with a lot of the sea fan bottom to the south of the main channel if an artificial island was created. It is also a known fact, that nature tries to reclaim and rebalance itself, so there is a strong possibility that the sand at the Stingray City Sandbar may shift to the dredged channel to the west as that is the direction of the current flow in the North Sound. The channel would



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always have to be dredged to maintain suitable depth and safe passage for the vessels utilizing it. The risk of groundings and pollution would be another element to take into account and when one considers that with other environmental risks that are related to dredging and shifting of materials on the seabed, the risk of the destruction of the marine ecosystem of the North Sound far exceeds the value gained from basing a port in there.

East End



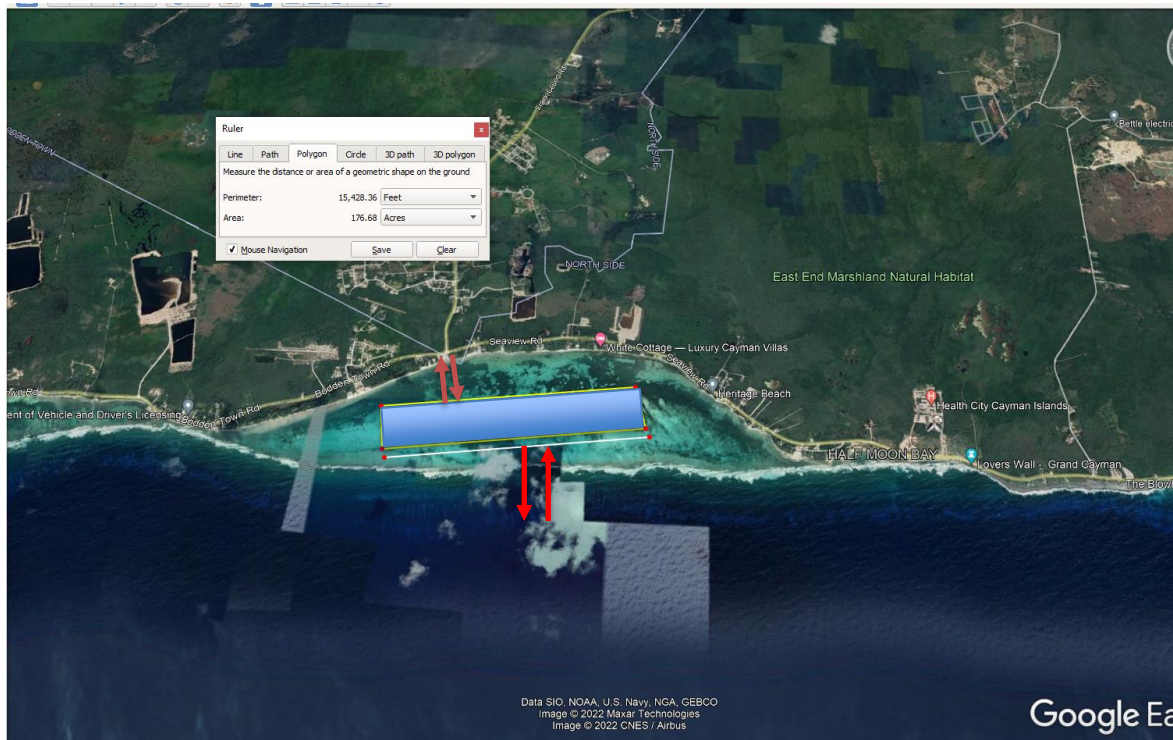
East End offers the simplest model to construct in that it only requires one straight cut through two sections of the reef and a basin inside of the reef protected area, the fill from which could be used to create an artificial island of about 230 acres inside of the sound. However, it means destroying over 230 acres of marine habitat and the construction of two causeways or solid roadways between the artificial island and the shore. Half of the area required for the artificial island is in a Marine Reserve. In addition to that, East End is the furthest district from the Capital and would entail the construction of a dual carriage highway to enable the movement of containers and cargo to the



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Capital in an efficient manner. Another downside is that the facility is constantly exposed to strong easterly winds and the full force of hurricanes. A cat 5 hurricane would completely destroy the facility as well as increase the degree of flooding from storm surge. Residents of the area where the port is located would no doubt vehemently object to it.

Frank Sound



Frank Sound is similar to South Sound. It could be achieved by cutting a single channel through the reef to minimize the amount of destruction of the coral reef, rather than a channel through the reef on one end and an exit on the other end. However, the single channel is not as safe navigationally as single channels for entry and exit, but it is functional. It would require use of tugs and pilots to maneuver the ships during arrival and departure from the facility. Dredging the basin for the berths on an artificial island located inside of the sound itself would also be required



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and the fill from it could assist in the creation of the artificial island. Space for a Mega Yacht Marina is limited. Future expansion is somewhat limited as it would mean acquiring the homes along the shoreline. There are also developments to the Northeast and Northwest of the port, as well as the main road to East End and Health City that would limit future expansion of the port. The cost of acquiring these properties and realigning the road would significantly add to the cost of the project. In addition to that, three quarters of the area needed to create the artificial island lies in a Marine Reserve area and building a port there would result in the complete loss of that sanctuary for marine life. Public buy-in would not likely be forthcoming. The hurricane Ivan experience has taught us that a Port in Frank Sound would likely be decimated in a category 5 hurricane.



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The Quarries at Breakers



The quarries at Breakers offer an excellent basin for a sheltered, deep water port. The excavated sites are already 50 ft draft and once completed, would serve no other useful purpose for the islands. To use them for a port would only require them to be connected together and to then to the sea. There are no Marine Reserves or Marine Parks where the channel would need to go. There is an abundance of undeveloped land surrounding those quarries and this would meet the objective to have space to expand the Port as needed. The cargo port when fully completed would encompass 660 acres with 23,000 linear feet of berthing space. The landside storage area would encompass approximately 800 acres. The total amount of land space that should be reserved and designated for this future port should be around 2,000 acres. This would allow for future expansion with no constraints. In the longer term, if a new international airport and the Iron Wood Resort is



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constructed near to it on the eastern end of the island, it may also become profitable to implement a home-porting facility for non-USA cruises to originate from.



Constructed in phases, this project would provide a dependable source of employment for a sizeable labour force for generations to come. One may ask why so much? One of the issues with developments in previous years was that they were only designed with the short term, or immediate need in mind. If the decision is taken to develop a new port elsewhere, it should be developed for the longer term of 50 to 100 years in mind. It doesn't all have to be built one time, but it should have provisions for the expansion required as time passes.



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Suggested Phases

Phase 1 for example, would involve excavating approximately 65 acres in order to construct the channel and berthing basin for the cargo and aggregate/cement facilities. Material from this would be used to fill the 30 acre site to be used for the container storage laydown area, the 20 acre site to be used for the customer service and warehouse facility, the mechanic shop and the maintenance facility, as well as another 20 acre site to be used for aggregate and cement discharge. There would be 5000 feet (2,000, 1,500, 1,200, and 800) of berthing space for vessels.

Phase 2 would involve the continued excavation of the adjoining basin to create additional berthing and storage for cargo containers, as well as berthing for tankers and a tank farm enabling far greater capacity than is currently available. This second phase may enable Cayman to enter the market to compete with Jamaica and Panama for transshipment and free-zone trade business as well as with Freeport Bahamas as a fuel storage and transshipment facility.

Phase 3 would involve excavating the area between the Breakers quarries and the Midland Acres quarries to create a basin that would allow for Mega Yacht and sailing vessels to berth as well as potential two cruise vessels for homeporting, creating yet more sources of economic activity.



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Phase 1





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Section 6: Stakeholders and Stakeholders Expectations

Stakeholders in the project would be the government, government agencies with an interest, the population as a whole, immediate land owners, potential developers, investors, shipping lines (cargo and cruise) and local businesses, as well as environmentalists.

Section 7: Political & Environmental Issues

No matter where any port is situated in the Cayman Islands, there are political and environmental considerations and hurdles to be overcome.

The bottom line is that to enhance the cargo facility in George Town will require lengthening the pier and deepening the water around the pier to an even 25 feet as well as reclaiming some more of the sea to fill and convert it to land for dock storage.

For a new port, the environmental impact is much greater. It means cutting a channel and giving up natural vegetation to construct the port, or creating an artificial island in the reef protected sounds. To lessen that impact, the suggestion is using a location where there were quarries, because once completed, those will be abandoned as useless. Converting them into a deep water port would therefore have a much smaller environmental impact. The benefits, however, are massive. It will provide employment for decades; it will provide for Cayman's cargo needs for multiple decades; it will enable the diversification of Cayman's maritime economy in many more ways than is currently possible.

Section 8: Findings

The analysis has shown that the vessels currently calling Cayman has the capacity to meet Cayman's cargo needs for the next 10 years, or at least up until its population reaches 100,000. With the expanded container storage area at CDC, there will be sufficient storage for containers there for that period as well. However, the storage area on the dock would need expansion, the number of RTGs would need to increase from two to four, the number of trucks and chassis to ferry containers to and from the dock would need to increase as the volumes begin to increase from 8 to 12 and the warehouse that stores LCL cargo would eventually need to increase in size, which means that it has to be located elsewhere on the property. That will entail acquiring additional property along Portland Road.



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It does not address the cruise situation, except for providing some additional parking for staging transportation, which will enable PACI to return the old Tower Building site to government and perhaps even the Taxi Dispatch Centre on Printer's Way as that is only .64 of an acre. Cruise Tourism will however, be restricted to its current standards and performance, due mainly to it remaining a tender Port.

That said, even if the Port of George Town is enhanced to meet Cayman's needs for the next ten to twenty years, there is no room to expand and grow beyond that and the longer term solution still has to be considered and addressed, so identifying a site for a future port has to begin now and planning has to commence for its development.

Section 9: Cost & Funding Options

The cost of two new RTGs assembled is approximately \$3 million. The cost of 4 new trucks and chassis is approximately \$500,000. For each acre of property, we purchase along Portland Road, we can expect to pay a minimum of \$1.5 million. To then acquire the necessary property and construct a new, larger warehouse, mechanic and maintenance facilities, removing the current ones to expand the container storage area would require tens of millions more.

To fill in the 3.15 acres between the north cargo pier and the south side of the RWT pier will cost approximately \$3 million, not including the cost of running the 700+ feet of piling and the concrete surface.

To fill in the 300 feet required to extend the cargo pier to a length of 700 feet will cost approximately \$1.6 million, excluding the cost of the 1,200 feet of sheet piling and the concrete surface.

The cost to increase the depth of water to an even 25 feet around the pier will be between \$250,000 to \$500,000 depending on the hardness of the bottom and the difficulty of the job.

The cost of two new dock cranes would be in the region of \$5 to \$6 million for both, but as long as the current shallow draft vessels are in use, the replacement of the two current cranes can be delayed.



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A rough order of magnitude estimate is that the total project at the harbour facility would cost in the region of \$25 million to \$30 million once pilings, steel concrete, labour and other materials are factored in and another \$35 million for land, new warehouse, mechanic shop and removal of the old ones at CDC. Under normal circumstances, with cruise revenues, PACI could have accomplished the improvements at the cargo dock over a six year period without any borrowing, but funding any form of expansion or development from current cargo revenues alone is just not possible, unless fees were raised significantly. Even a conventional loan could not be serviced from the current cargo revenue.

To compute the cost of constructing a brand new port with all of its implications would require a lot more details than this strategic outline provides; costs such as land acquisition, surveys, EIA studies, plans, consultants, excavation, bulkheads, filling property, buildings, paving, equipment, training, administration etc. However, the suggestion would be to cost it on a phase by phase basis as previously stated in this outline, as it is a long term project and the costs will vary and change during its life span.

To fund the new port, Government has many options available to it; Public Private Partnerships, Loans, Bonds, Shares, Private Investors, or a mixture of them all.



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PORT AUTHORITY OF THE CAYMAN ISLANDS STRATEGIC OUTLINE CASE

Appendix 1

Proposed Cargo Port Development Project

Steering Committee Terms of Reference



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Background

The Cayman Islands Government (CIG) is considering the development of a new cargo port (“the Project”) in order to improve the safety and quality of the cargo management experience and increase the capacity for cargo operations for the next 100 years.

CIG’s objectives for the Project are as follows:

- *To deliver a service that enhances the cargo operations experience and efficiency, increases cargo capacity and maximises revenue through cargo imports*
- *To obtain best value, developing acquisition and contract strategies that ensure a transparent and competitive environment throughout the process of Project delivery*
- *To finance the Project from external sources such that the Project is affordable to CIG and bankable to investors*
- *To obtain funding to adequately develop the Project in a way that provides best certainty of out-turn price.*

Function of the Steering Committee

The function of the proposed cargo port development project Steering Committee is to take responsibility for the business issues associated with the project. The Steering Committee is responsible for approving budgetary and procurement strategy, defining and realising benefits, and monitoring risks, quality and timeliness.



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Role of the Steering Committee

The role of the Steering Committee is to:

- take on the responsibility for the project's feasibility, business plan and achievement of outcomes
- ensure the project remains aligned with Cayman Islands Government strategic aim(s) and policy objective(s)
- ensure the project's scope aligns with the requirements of the stakeholder groups
- provide those directly involved in the project with guidance on project business issues
- ensure effort and expenditure are appropriate to stakeholder expectations
- address any issue that has major implications for the project
- keep the project scope under control as emergent issues force changes to be considered
- reconcile differences in opinion and approach, and resolve disputes arising from them
- report project progress on a monthly basis to the Deputy Governor so that Cabinet can be briefed on developments / issues.
- take on responsibility for any whole-of-government issues associated with the project
- review and approve final project deliverables

Role of individual Steering Committee members

The role of the individual member of the Committee includes:

- understanding the strategic implications and outcomes of initiatives being pursued through project outputs
- appreciating the significance of the project for some or all major stakeholders and perhaps represent their interests
- be genuinely interested in the initiative and the outcomes being pursued in the project
- be an advocate for the project's outcomes
- have a broad understanding of project management issues and the approach being adopted
- be committed to, and actively involved in pursuing the project's outcomes

In practice, this means that individual members will:



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- ensure the requirements of stakeholders are met by the project's outputs
- help balance conflicting priorities and resources
- provide guidance to the Project Team and users of the project's outputs
- consider ideas and issues raised
- review the progress of the project
- check adherence of project activities to standards of best practice, both within the Government and in a wider context

General

Membership

The Steering Committee shall be comprised of:

- Stran Bodden - Chief Officer, Ministry of Tourism and Transport (Chairman)
- Cline Glidden – Chairman, Port Authority of the Cayman Islands
- Joseph Woods – Cruise and Security Manager, Port Authority of the Cayman Islands
- Capt. Ashton Bodden - Sea Captain/Seaman
- Shomari Scott – Chief Business Officer, Health City Cayman Islands
- Project Manager – to be nominated
- Secretary – to be nominated

Individual Steering Committee members have the following responsibilities:

- understand the goals, objectives, and desired outcomes of the project.
- understand and represent the interests of project stakeholders.
- take a genuine interest in the project's outcomes and overall success.
- act on opportunities to communicate positively about the project.
- check that the project is making sensible financial decisions – especially in procurement and in responding to issues, risks and proposed project changes.



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- check that the project is aligned with the organizational strategy as well as policies and directions across government as a whole.
- actively participate in meetings through attendance, discussion, and review of minutes, papers and other Steering Committee documents.
- support open discussion and debate, and encourage fellow Steering Committee members to voice their insights.

Chair

The Chair, Mr Stran Bodden, Chief Officer Ministry of Tourism and Transport shall convene the Steering Committee meetings.

If the designated Chair is not available, then **Name to be inserted** (referred to as the Acting Chair) will be responsible for convening and conducting that meeting. The Acting Chair is responsible for informing the Chair as to the salient points/decisions raised or agreed to at that meeting.

The responsibilities of the Steering Committee Chair are as follows:

- sets the agenda for each meeting.
- ensures that agendas and supporting materials are delivered to members in advance of meetings.
- makes the purpose of each meeting clear to members and explains the agenda at the beginning of each meeting.
- clarifies and summarizes what is happening throughout each meeting.
- keeps the meeting moving by putting time limits on each agenda items and keeping all meetings to two hours or less.
- encourages broad participation from members in discussion by calling on different people.
- ends each meeting with a summary of decisions and assignments.
- follows up with consistently absent members to determine if they wish to discontinue membership.
- finds replacements for members who discontinue participation.

Agenda Items

All Steering Committee agenda items must be forwarded to the Secretary by close of business 7 working days prior to the next scheduled meeting.



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The Steering Committee agenda, with attached meeting papers will be distributed at least 5 working days prior to the next scheduled meeting.

The Chair has the right to refuse to list an item on the formal agenda, but members may raise an item under 'Other Business' if necessary and as time permits.

Minutes & Meeting Papers

The format of the Steering Committee deliberations shall be as Minutes.

The minutes of each Steering Committee meeting will be prepared by the Secretary.

Full copies of the Minutes, including attachments, shall be provided to all Steering Committee members no later than 5 working days following each meeting.

By agreement of the Committee, out-of-session decisions will be deemed acceptable. Where agreed, all out-of-session decisions shall be recorded in the minutes of the next scheduled Steering Committee meeting.

Frequency of Meetings

The Steering Committee shall normally meet on a monthly basis ideally timed to coincide with key milestones, which will be set out in the Project Plan.

Proxies to Meetings

Members of the Steering Committee shall be able to nominate a proxy to attend a meeting if the member is unable to attend.

The Chair will be informed of the substitution at least 5 working days prior to the scheduled nominated meeting.

The nominated proxy shall have voting rights at the attended meeting. The nominated proxy shall provide relevant comments/feedback, of the Steering Committee member they are representing, to the attended meeting.



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Quorum Requirements

A minimum of 3 Steering Committee members is required for the meeting to be recognised as an authorised meeting for the recommendations or resolutions to be valid.