

# **MASTER PLAN PORT OF BLOWING POINT, ANGUILLA**

Prepared for:

**Ministry of Economic Development, Investment, Commerce and Tourism, Government of Anguilla  
And  
Infrastructure Division, Caribbean Development Bank**

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**March 2008**



**JACOBS  
CONSULTANCY**



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PORT MASTER PLAN**

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## Table of Contents

Section	Page	Section	Page
EXECUTIVE SUMMARY .....	i	VI. FINANCIAL & ECONOMIC ASSESSMENT .....	59
I. THE PORT SETTING .....	1	A. Financial Analysis .....	59
A. Background .....	1	B. Economic Assessment .....	64
B. Operations and Services .....	1	VII. PROJECT MANAGEMENT .....	66
C. Facilities Inventory & Utilities .....	2	A. Design Strategy & Standards .....	66
II. FOUNDATION FOR THE FUTURE .....	7	B. Revenue Optimisation .....	<b>Error!</b>
A. Anguillan Economy .....	7	C. Execution Strategy & Plan .....	67
B. Port Commercialisation .....	8	Bibliography	
C. The Master Plan Methodology .....	8		
D. Historical Port Traffic .....	8		
E. Anguilla Passenger Forecasts .....	13		
F. Blowing Point Port Forecasts .....	14		
G. Development Programme .....	19		
III. TERMINAL DEVELOPMENT OPTIONS .....	23		
A. Introduction .....	23		
B. Terminal Design Options .....	23		
C. Evaluation & Recommended Design Option .....	25		
IV. LAND USE PLAN .....	39		
A. Existing Land Use .....	39		
B. Planning of Port Land .....	40		
C. Cost Estimate of Preferred Option .....	46		
D. Phasing of Development Plan .....	46		
V. ENVIRONMENTAL & SOCIAL ASSESSMENT .....	49		
A. Introduction .....	49		
B. Initial Environmental Assessment .....	49		
C. Initial Social Assessment .....	53		
D. Initial Environmental Impact Assessment .....	53		
E. Initial Social Impact Assessment .....	56		





# EXECUTIVE SUMMARY

Anguilla is one of the Caribbean's smallest islands but produced some of the region's highest growth rates during the late 1980's. Tourism has been growing at double digit rates since 2003; with growth of 17.5% in 2006.

Tourism, as measured by Hotels and Restaurants, continued to be the largest contributing sector to the Anguillan economy, in terms of overall economic activity in 2006, with EC \$119.56 million, or 28.1% of GDP. Total visitor arrivals to Anguilla increased by 16.8% in 2006 primarily due to excursionists and tourist participating in the island's cultural activities. More than 60% of the tourists arriving in Anguilla are American.

In 2007 Anguilla travel and tourism was expected to generate USD \$159.4 million of economic activity compared to \$157.5 million in 2006. The substantial growth of the tourism industry in Anguilla, beginning in 2005, has resulted in the development of new hotels and other tourist destinations. There are a total of 10 major resort residential tourism projects currently approved (under development or planned), with an investment of some \$3.24 billion USD.

The Blowing Point Port ferries annually serve St-Martin every ½ hour. During the peak season (November-March) three of the larger ferries (80-135 passengers) provide 2 trips a day for 3 day a week while charters (crafts equal and less than 12 passengers) serve St-Maarten every 15 minutes. Saturday is the busiest day of the week and between 15:00-20:00 hours the Port receives some 700 arriving passengers of which about 80% are Anguillan and Resident.

The increase in the use of Blowing Point has made it such that the existing Terminal (420m<sup>2</sup>) and parking facilities (<30) capacity have far been exceeded, and therefore, the Government of Anguilla has engaged the services of Jacobs Consultancy to develop a Master Plan for the long term development (20 years) of the Port.

An integral part of the Master Plan was to examine how the Blowing Point environs could be developed as an economic hub and to include residential, commercial and resort type activities. Furthermore, the Government of Anguilla are in the process of preparing the necessary legislation to put in place a Port Authority and new organisation to commercially operate its port-airport system.

While developing the Master Plan we consulted with ferry users, stakeholders and operators, gathering planning and design related data and assessing various environmental, social and operational

conditions with the view of formulating a feasible and practical Development Programme that could be reasonably implemented over time to meet the 20 year forecasted demand.

To develop a long range forecast of traffic moving through the Port, the following factors were examined:

- Historical trends at Blowing Point Port;
- The development of tourism in Anguilla as well as throughout the Caribbean;
- The economic development of Anguilla and other significant market segments; and
- The potential risks to traffic growth.

Total passenger traffic increased at an average annual rate of 8.1% between 2002 and 2006; doubling the average growth rate of the previous fifteen years. In 2006 the total annual arrivals and departures for Blowing Point was 424,567 passengers.

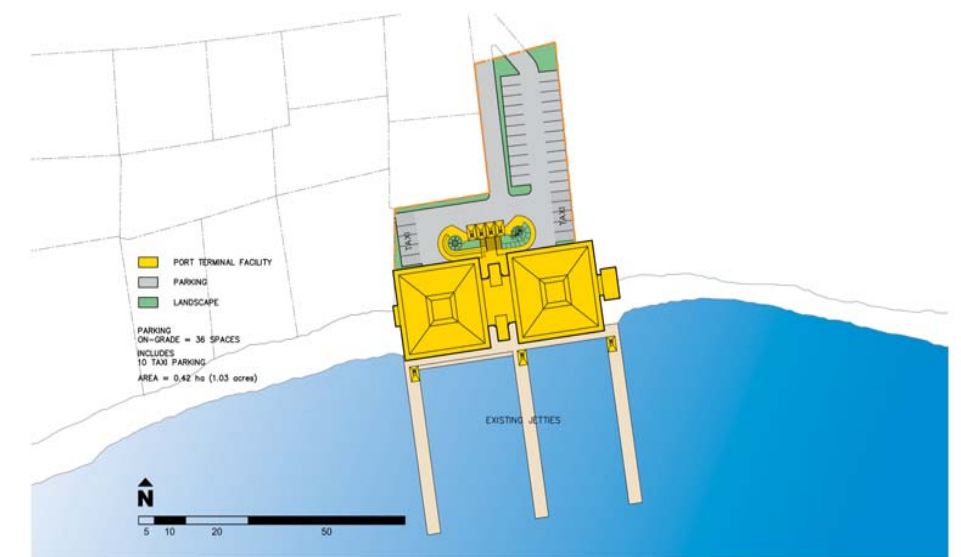
Passenger forecasts for Blowing Point have been developed for Base, Low and High Case scenarios as well as by standard linear regression. The forecasts selected for the development of Blowing Point was the Base Case with development of the Wallblake Airport: runway extension thereby allowing flights to and from Miami. Under this scenario we have estimated 724,409 arriving and departing passengers for the planning year of 2027.

In order to determine the Terminal building space requirements, an estimate of the forecasted planning peak hour passenger was developed using two methods: firstly by averaging hours during the peak day of the month the number of arriving passengers and secondly presuming a combination of arriving vessels into the Port. The combination included 80% passenger load factor for two 135-seat vessels, two 80-seat vessels and 50% for four 12-seat vessels. Based on the second methodology a peak hour passenger estimate of 368 was determined for the year 2027. The peak hour passenger for the year 2027 generated a Terminal building requirement of about 2353 m<sup>2</sup> (25,311 ft<sup>2</sup>).

In October 2007, Jacobs conducted two strategic goals workshops with Government officials, the Port Board, ferry operators and other stakeholders in order to articulate various levels of service for operating ferry Port services, Terminal building performance requirements and operating restrictions/conditions. Of the total requirements and strategic goals, at least two have a significant impact on the Port Development Programme. The first is that 90% of the passengers and baggage be processed within 15 minutes from the time of debarkation to the landside kerb and the

second is the requirement for 650 car parking positions as established by Government.

From the accepted Development Programme, the Architect prepared two Terminal design concepts that meet the overall operational and functional requirements established by the 20 year forecasts for passenger activity and the outcome of the strategic goals workshops. Most important to the Plan, options were designed such that the building could be constructed within the boundaries of existing Port lands. Option 1 is shown below to demonstrate that the new Terminal can be constructed without the purchase of additional property. The same is true for option 2.



ANGUILLA, BLOWING POINT PORT MASTER PLAN  
SITE DEVELOPMENT PLAN - PHASE I (EXISTING PORT LANDS)

Subsequently, we presented the pros-cons of the two Terminal options to Government Officials, Port Board and other stakeholders; resulting in Option 1 being preferred. We then proceeded to further refine the design in terms of landside structures and Land Use Plan for the Port environs.

The draft National Land Use Plan for Anguilla classifies Blowing Point existing land use as residential-resort and residential. The draft National Plan recommended that Blowing Point be developed as a growth centre to reflect and exploit its coastal location, to create a focus for marine based recreation and tourism activities and to take advantage of opportunities for improving business linkages between St Martin and Anguilla. This type of development would inevitably relieve some of the pressure for new commercial development from concentrating in the "The Valley" and provide jobs for the Blowing Point community, thereby serving to increase its growing population and commercial



activity. Unfortunately and a draw-back to the proper development of Blowing Point is failure to have an adopted National Land Use Plan for Anguilla.

In order to meet the requirement for the parking of 650 vehicles and encourage commercial development of the Blowing Point and its environs, three possible Phases of development were prepared.

- Phase I is to construct the new Terminal on existing Port land and provide 36 car park positions;
- Phase II requires that acquisition of about 1 hectare of land to provide some 250 car parking positions; and
- Phase III requires the acquisition of an additional 8 hectares of land in order to provide some 650 car park positions and the potential for significant commercial and residential development.

With regards to Phase III, the additional lands could be zone by legislation should Government not wish to purchase these lands; however, it is recommended that Phase II land requirements be purchased by Government.

The cost of development was estimated to range from 13.4 million USD for Phase I and 15.4 million USD for Phase II excluding the cost of land as it was assumed that Government would lease or concession these lands to the new Port-Airport Authority.

Phase III-b consisting of 650 ground level car parks is estimated at some 16.4 million USD whereas Phase III-a consisting of a car parking structure is estimated at some 27 million USD. For the exception of Phase III-b, which was considered to be marginally financially feasible all other development Phase alternatives were found to be very financially and economically feasible. Reference section VI of the Master Plan for further details.

An integral component of developing the Master Plan was to undertake an assessment of existing Environmental and Social impacts regarding the construction of the Development Plan and the long term operations of the new facilities. In Section V of the Master Plan we report our findings and recommendations of the initial assessment of impacts, which during the detailed design stage will guide our designers to mitigate issues raised. An Environmental-Social Management Plan will be developed during the detailed design stage to guide the Terminal building contractor and Port Management during ongoing operations.

The Master Plan process has acknowledged that the purchase of additional lands and/or the passing of zoning legislation for the Blowing Port environs will likely take some time and that it will be a difficult process. Therefore, we have recommended that the proposed new Terminal be constructed in 2009 in order to quickly

relieve the current overcrowded conditions found at the Port. In parallel with its construction Government is encouraged to purchase additional lands for the implementation of Phase II Development Plan that will provide some 250 car parking positions and act as a first step to the proper commercial development of the Blowing Point environs. A rendering of the new Terminal is displayed.

working drawing submission and at the submission of Draft Tender Documents. An additional 2 months will be required for Tendering of the Works by pre-qualified contractors and 1 month for the Government to award a Contract to the selected Tenderer.



### ANGUILLA, BLOWING POINT PORT MASTER PLAN

At a recent meeting (March 2008) with the Chief Minister and Cabinet, the decision to proceed with the detailed design and plans to finance the Phase I Development Plan was agreed-to in principle with a construction start target of January 2009.

Once written approval is provided by the Ministry of Economic Development, Investment, Commerce and Tourism; Jacobs estimates the detailed design process will take about 6 months given a 2 week approval process time at the 60% and 90%

Jacobs and its Team of consultants are grateful to the Government of Anguilla and the Caribbean Development Bank to have been given the opportunity of developing, in close collaboration with its stakeholders, the Master Plan for the passenger ferry operations at the Port of Blowing Point.





# I. THE PORT SETTING

## A. Background

Anguilla, Exhibit I-1, is the northernmost island of the Leeward Islands in the eastern Caribbean. The island is long and thin being about 28 kilometres long but only 6 kilometres wide at the widest place. The total land area is about 91 square kilometres.



Exhibit I-1. Anguilla, WI

Anguilla is one of the Caribbean's smallest islands but produced some of the region's highest growth rates during the late 1980's. This growth was a direct consequence of the Government's emphasis on up-market tourism that led to a period of rapid construction, (new hotels, rental villas, and condominiums), which substantially expanded the island's tourism sector. To diversify its economy Anguilla is actively promoting the island as not only a premier tourist destination, but as the offshore jurisdiction for discerning investors.

On the island there are three port facilities. Several of the overlapping functions that previously existed have since been organized into separate functioning facilities as follow:

- Road Bay – Cargo facilities currently planned to be a small cruise ship terminal or marina
- Corito Bay – Proposed cargo facilities current fuel terminal

- Blowing Point – Ferry terminal to/from St. Martin/St. Maarten and St. Barth el my

The Port of Blowing Point provides the island's only ferry service to the island of St Martin and St Maarten. A regular scheduled service links Anguilla to the French side of the island at Marigot Bay.

The Port Terminal, which was built in the 1970's to handle a small volume of cargo and visitors, was woefully inadequate to handle the increased imports and 50,000 visitors by 1988. A separate terminal and pier were built to accommodate this increase.

Today a number of visitors passing through Blowing Point, especially the day-trippers from St Martin and St Maarten, continue to increase, which has created the following operating problems:

- The size of the Port land and the buildings is too small for the increased volume of passenger through the Port;
- The number of parking spaces is inadequate; and
- The available space for the movement of passengers by taxi, limousines and buses is too small and can be unsafe.

It is further understood that the GOA in its development strategy for Blowing Point is creating an investment climate necessary to attract the private sector to develop the commercial, residential and resort sectors.

The continuing development of the tourism sector with its importance to the Anguillian economy as well as the need to provide adequate and appropriate ferry facilities for passengers make it necessary to look at the development of Blowing Point to meet existing demand and forecast increases.

For these reasons Jacobs Consultancy has been retained by the Government of Anguilla and the Caribbean Develop Bank to prepare a Master Plan for the development of Blowing Point Port that will meet future demands to the year 2027.

## B. Operations and Services

The Blowing Point Port ferries annually serve St-Martin every   hour. During the peak season (November-March) three of the larger ferries (80-135 passengers) provide 2 trips a day for 3 day

a week while charters (crafts equal and less than 12 passengers) serve St-Maarten every 15 minutes.

The regular scheduled ferries operate between 7:00-20:00 hours whereas additional trips may be requested in advanced up to 23:00 hours. About one day per year the waters are too rough to allow ferry vessels to cross during hurricanes when operations are closed.

The 15 regular scheduled ferries are currently owned by 10 individuals or companies whereas some 20-30 charters are owned by 10 individuals or companies. Operators-owners do not have contracts and/or lease agreements with Port Management or other Government Ministries. However the GOA issues an operating license for each of the vessels.

Saturday is the busiest day of the week and between 15:00-20:00 hours the Port receives some 700 arriving passengers of which about 80% are Anguillian and/or Resident. On the same day an average of 450-vehicles are on Port and neighbouring lands excluding buses and taxis. Port Management and Ministry Officials have advised that the Port requires 650 parking positions. Of the total population of some 13,000 people, we are told that there are some 10,000 vehicles on the island.

Generally, passengers disembark and bags are unloaded by ferry operators onto one of the three 14-foot wide jetties. When these activities are carried out simultaneously the process is somewhat unsafe for passengers. Some bags are picked up immediately by passengers while other bags are brought to the Terminal by Port staff. Passengers make their way to Immigration and subsequently to Customs where bags can be screened or searched and duty paid as might be required. There are two Immigration lines, one for residents and a second for tourists. During our site visits, we noted that the Immigration-Customs process took between 10 to 20 minutes to clear a typical ferry load although we are told that during peak season, the processing of passengers increases significantly. We were advised by Customs that all (100%) bags for arriving and departing passengers are to be screened by machine or hand verified. Customs verify in-coming bags while Port Security check out-going passenger bags.

On departure ticket sales are handled by an Operator Agent, departures tax is paid to Customs while an Emigration Officer verifies passports. Subsequently, bags and passengers are screened by Port Security Officials prior to entering the departures lounge. While on site during the off-season, we noted that the



departure process took about 15 minutes prior to entering the departures lounge.

Within the Port’s limited parking area, there are 12 dedicated positions that are shared by some 60 plus taxis and 6 coaches-buses (50 seats) twice daily. Port lands are insufficient to provide turning radiuses required for buses, and hence these are currently parked on private property or along the main road allowing passengers to walk to and from the Terminal. A few parking bays located on the East side of Port lands are for GOA officials while 3 priority taxi parking bays are provided just outside the Terminal.

There is no retail within the current Terminal whereas food-beverage operators are located just outside Port land. Further, rental agencies shuttle visitors to and from the Terminal as there is no dedicated area for their service.

We were told that Port Management want to relocate the current fuel tank farm operations within the Port expanded land area including the provision of new tanks.

The operations of the Blowing Point Port and its management are the responsibility of the MICUH although a Board Committee has been established by the GOA to oversee Port development, operations and management. Exhibit I-2 summaries the number and type of personnel working at the Blowing Point Port.

**Exhibit I-2. 2007 YTD Passenger Traffic**

Personnel Category	# Personnel	# of Shifts
Port Management	6	1
Port Security	21	2
Police	6	2
Customs	18	2
Immigration	10	2
Departure Tax Collectors	3	2
Taxi Dispatchers	3	2
Vessel Agents	6	1
Charter Boat Agents	6	1
Porters	4	1
Vessel Crew/Captains	100	2

### C. Facilities Inventory & Utilities

The Blowing Point Port consist of a combined arrivals and departures Terminal, three jetties and a limited car parking all of which are situated on some ¼ of an hectare of land. The old cargo facility is currently being upgraded for use by Port Management and Customs Officials. The aerial photograph of Blowing Point has

been taken from Google Earth, last updated in 2006, does not show the recent construction of the three jetties.



**Exhibit I-3. Blowing Point Port**

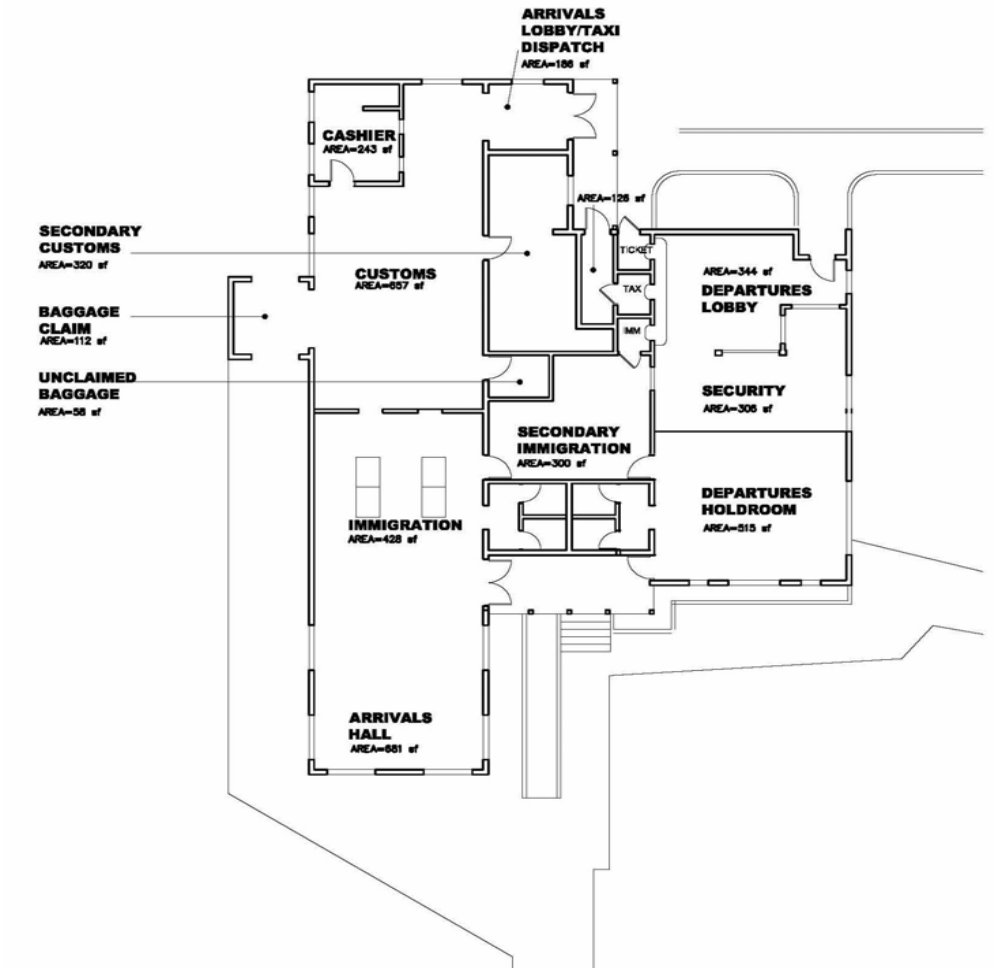
#### 1. Terminal Building

The Terminal Building is a single-storey concrete building with a three hip corrugated galvanised steel roofs; Exhibits I-4 and I-5.



**Exhibit I-4. Terminal Building**

The terminal is laid out in a simple Tee-shape plan within which departing and arriving functions take place and these two main areas are separated by secondary Customs and Immigration offices and restroom facilities. Recent renovations to the existing Terminal have expanded the Arrivals Hall and added a small baggage claim area thereby increasing the Terminal to approximately 420 square metres. Generally one has the feeling of being cramped as the building is too small for the level of current activity.



**Exhibit I-5. Existing Terminal Floor Plan**

## 2. Departures Processing

The check-in area is divided into three functions. The first position is manned by the Ferry operators for the sale of boarding tickets. The second is the Government of Anguilla's collection of the departures tax and the third is the Emigration passport control.

Rapidscan screening equipment and a Garrett walk through metal detector are installed to provide 100% baggage verification and passengers screening. The space allocated for this equipment is very limited.

The departures lounge has seating for 50 passengers. The space is about 7m x 6m and uncomfortably congested given that large ferries can accommodate 135 passengers. There is little circulation space among the seats. The seating layout does not provide a pleasant experience and a multitude of signs are pasted on the walls in an ad hoc fashion. Windows are generally small with metal security bars.



Exhibit I-6. Check-in Area

Food & beverage and other concessions are not currently provided although on occasion passengers have more than an hour's waiting period. Small washrooms for men and women are connected to the waiting room. Neither of these rooms is designed for barrier free access. Ferry operators arranges for the passengers to commence boarding at which point boarding passes are collected and the passengers proceed to the middle jetty to board the departing ferry. Larger bags and containers are left on

the jetty for the ferry operator to load. The middle jetty is dedicated for departures.



Exhibit I-7. Departures Lounge

## 3. Arrivals Process

The western jetty is dedicated for arrivals thereby leaving the most easterly jetty for vessel servicing requirements and use by emergency services. Passengers generally collect smaller bags, which have been offloaded from the vessel onto the jetty and subsequently passengers walk to the Arrivals Hall. Large bags and containers are loaded on a motorised cart and driven to the bag claims area located on the west side of the Terminal.

The Arrivals hall is a room of about 6.4m wide by 8.8m long. Two lines generally form for Citizens of Anguilla and Visitors. Four immigration stations are available for Immigration processing. Visitors receive the Immigration forms from Ferry operators. The forms are collected by the Immigration officers and information is logged. A small secondary immigration room is located adjacent to the desks. No detention facility is provided. Should a non-desirable be identified attempting to enter the country, the individual is detained in the Secondary Immigration Room. The police are called in and the individual taken to the Police Station for further processing.

Returning residents who have shopped in St. Martin and St. Maarten generally return with two or three bags and/or containers. There is a small annex on the west side of the

Terminal with roll-up shutters where the baggage cart drives into to drop-off bags/containers. Passengers collect their bags prior to Customs processing.

The baggage claim area, the scanner, metal detector and Customs desk are cramped in very limited space thereby making processing a difficult task. The concept of green or red line has not been established thereby forcing passengers with nothing to declare to wait while others get searched. A small unclaimed baggage storeroom is located beside the Customs desks. Next to it is a room for Secondary Customs. Customs duties are collected by a Cashier located immediately after the Customs verification area.

No facility is provided for Port Health. Its services are called upon when necessary to process plants and animal products. Illegal products are confiscated for destruction off-site. Sick travelers are detained and a doctor is called to make a determination. No examination room exists.

Prior to leaving the Terminal, a small area has been allocated for a taxi dispatch podium. Double exit doors open to a covered patio with 3 taxi parking positions that are allocated in terms of priority for passenger pick-up.



Exhibit I-8. Immigration & Customs

Exhibit I-9 displays the allocation of Terminal building space by Port function.



**Exhibit I-9. Terminal Space Allocation**

DESCRIPTION	AREA [SQ.M.]	AREA SQ.FT.
Departures/Check-in	32.0	344
Tickets/Tax/Emigration	13.7	147
Security	28.4	306
Departures Holdroom	47.8	515
Arrivals Hall	63.3	681
Immigration	39.8	428
Secondary Immigration	27.9	300
Baggage Claim	10.4	112
Customs	61.0	657
Secondary Customs	29.7	320
Arrivals Lobby/Taxi Dispatch	17.3	186
Customs Cashier	22.6	243
Unclaimed Baggage	5.4	58
Restrooms/Miscellaneous	20.5	221
<b>TOTAL</b>	<b>419.7</b>	<b>4,518</b>



**Exhibit I-10. Port Jetties**

The building is in a state of disrepair; however it is currently undergoing some renovation to better accommodate Port Management while plans of a new facility are completed.

**4. Jetties & Connecting Boardwalk**

Three new jetties have recently been completed. The jetties are over 50 meters long, with a connecting boardwalk. Each jetty is over 4 meters wide, spaced about 20 meters apart, which allows ferryboats to dock on both sides. The three jetties are designated [from the west] the arrivals, departures and service/maintenance slips. The connecting boardwalk was built on reclaimed land from the sea. Each of the newly constructed jetties can accommodate 6 ferries.

**5. Port Management Building (Former Cargo Warehouse)**

The old Cargo warehouse is currently being used by Port Management. It is a two-storey concrete building approximately 232 square metres with a flat roof, an exterior staircase and a wrap-around exterior balcony which extends onto three sides of the second floor. Port Management have an office on the second floor that doubles as a security surveillance centre as well as harbour-master functions. The Security Cameras [CCTV System] are monitored at one station with multi split-screens. The police and Customs Officials are also located within the building.



**Exhibit I-11. Port Management Building**

**6. Parking**

About 60 taxis operators work at the Port on a rotational basis. There are three dedicated spaces located immediately outside the arrivals doorway where the taxis acquire fares in sequence. Twelve other taxi stands are allotted in the middle of the driveway and help create a one-way driving loop for traffic circulation. Additional parking spaces are allocated for Government officials on the east side of the parking. A small wooden shed to the northeast functions as the waiting area for the taxi drivers.

The parking area driveway turning loop is not large enough for buses and hence these park on privately owned land located to the north and east of the Port Facility.

An estimation of the average count of parking spaces provided in and around the Port facility is about 450 though we are advised by Port Management and the Ministry that some 650 vehicles have been parked in and about the Ferry Terminal.



**Exhibit I-12. Parking Facility**



## 7. Port Utilities and Services

### *Electrical Systems*

Anguilla has a diesel operated power generation plant at Corito Bay. There is some discussion of implementing wind generating power plants but the idea is at its early stages. The plant generates sufficient power for the Island. The Port has emergency generating equipment providing some 70 KVA of electricity as back-up to Terminal operations during main electrical outages.

Light standards on the jetties are new and bulbs are of the high-pressure sodium type. The Terminal generally makes use of fluorescent light fixtures.

### *Mechanical Equipment, Water & Wastewater Systems*

The temperatures in Anguilla generally vary from 26°C to 33°C. The island gets the benefit of easterly Trade winds. Minimal air conditioning is currently provided from individual split unit systems with roof mounted condensers. Ceiling fans are used in the waiting areas to improve passenger comfort.

The Port is supplied water from the islands reverse osmosis desalination Plant. We were told that the local population prefers rainwater that is collected from cisterns into holding tanks constructed within the premises. The existing Terminal has a collection tank under the ground floor. No By-law exists to define the size of the collection tank required and it is left to individual owners to decide. A secondary source of water is from two main aquifers on the island. The water tends to be saline, where seawater infiltrates the aquifers, and hence, it has to be desalinated.

Sewage is handled by a three part septic system with 2 holding tanks and a filtration bed that is open on the bottom to allow the effluent to seep into the ground. Since it is close to the shoreline, inevitably it finds its way into the ocean.

There is no provision for fire fighting at the Port. The Island Fire Department is located at Wallblake Airport Terminal.

### *Garbage Collection*

Garbage is disposed of into waste collection bins on the outside of the Terminal and carted away to a landfill facility. We were told that the open-air facility is a concern as a result of infestation by small animals and vermin.

### *Security System*

The Terminal has a CCTV security system that is monitored within the Harbour Master/Security Room on the upper level of the Port Management building (old Cargo building).

### *Fuel Supply*

Two 2000-gallon fuel tanks are located on the property to the northeast of the Terminal building. The fuel is piped along a line mid-way within the site and then to the service-maintenance jetty. There is current discussion of relocating the fuel-tank farm operations to the east and for these to have a more direct route for the fuel line to the point of use.

### *Privately Owned Landside Development*

Small businesses have developed along the road leading to the Port Facility. Pear's Bar & Restaurant, Link Ferry, Splash Beach Wear, Car Rental and Big Jim's Bar & Grill are located immediately to the north of Port lands. Many of these set up irregular parking lots to accommodate the need for additional parking for travelers and Port workers and vessel operators.





# II. FOUNDATION FOR THE FUTURE

## A. Anguillan Economy

### 1. Economic Activity and Economic Growth

The Anguillian economy is dominated by and dependent upon the tourism sector, which continues to grow strongly as it directly contributes about one third of Anguilla's GDP. Construction also continues to boom with growth of 12.4% in 2005.

Arrivals to Anguilla increased by 16% in 2005 with overnight tourists increasing by 13% and day-trippers increasing by 18%. The average length of stay increased from 7.6 days in 2004 to 8.1 days in 2005.

Anguilla has a consumption based tax system that promotes savings, investments and growth. As such, there are no personal or corporate income taxes, capital gains taxes, or inheritance taxes.

Exhibit II-1. Anguilla Economic Statistics

CIA World Factbook (2007) Economic Statistics	
GDP (purchasing power parity) (2004 est.)	\$108.9 million
GDP (official exchange rate) (2004 est.)	\$108.9 million
GDP – real growth rate (2004 est.)	10.2%
GDP – per capita (2004 est.)	\$8,800
GDP – composition by sector (2002 est.)	Agriculture: 4%
	Industry: 18%
	Services 78%
Exports (2005 est.)	\$14.56 million
Export Partners (2006):	UK, US, Puerto Rico, Saint-Martin
	\$129.9 million
Imports (2005 est.)	Fuels, foodstuffs, manufacturers, chemicals, trucks, textiles

Economic activity in Anguilla in 2006<sup>1</sup> totalled over EC\$425.26 million (in current prices) (~\$157.5 million USD), representing an increase of 19.3% from 2005 figures of EC\$356.41 million. In 2005, GDP (also in current prices) grew by 16.4%.

The four largest economic sectors contributing to GDP in 2006 were: tourism (EC \$119.56 million or 28.1% of GDP); construction (EC \$77.43 million, 18.2% of GDP); government services (EC \$67.12 million, 15.8% of GDP); and banking and insurance services (EC\$49.65 million or 11.7% GDP).

### 2. Population

The latest available census data is from 2001, where the population of Anguilla was 11,561. The Anguilla Statistics Department does, however, publish population estimates as shown in Exhibit II-2 below. The Anguillan population has increased at a fairly constant rate with few fluctuations between 1994 and 2003. The average annual growth rate of the population using this data is 2.8%, meaning that the Anguillan population is estimated to double in 25 years. The CIA World Factbook (2007) estimates the 2007 Anguillan population to be 13,677 with a growth rate of 1.375% and a median age of 31.6 years.

Exhibit II-2. Historical Anguilla Population

Year	Total Population Estimates	Annual Growth
1994	9,524	3.2%
1995	9,818	3.1%
1996	10,095	2.8%
1997	10,373	2.8%
1998	10,658	2.7%
1999	10,947	2.7%
2000	11,254	2.8%
2001	11,561	2.7%
2002	11,919	3.1%
2003	12,200	2.4%

Source: Anguilla Statistics Department

The Statistics Department also publishes population projections – the latest being for the period 2002-2011. Assuming low migration, the population in 2011 is estimated at 14,349 (2% p.a. from 2003); with medium migration 15,236 (2.8% p.a. from 2003); and with high migration 16,449 (3.8% p.a. from 2003).

### 3. Anguilla and Caribbean Tourism Trends

More than 60% of the tourists arriving in Anguilla are American. Tourism has been growing at double digit rates since 2003; with growth of 17.5% being recorded in 2006<sup>2</sup>. Tourism, as measured by Hotels and Restaurants, continued to be the largest contributing sector to the Anguillan economy, in terms of overall economic activity in 2006, with EC \$119.56 million, or 28.1% of GDP. Total visitor arrivals to Anguilla increased by 16.8% in 2006 – primarily due to excursionists and tourist partaking in the island's cultural activities such as festivals.

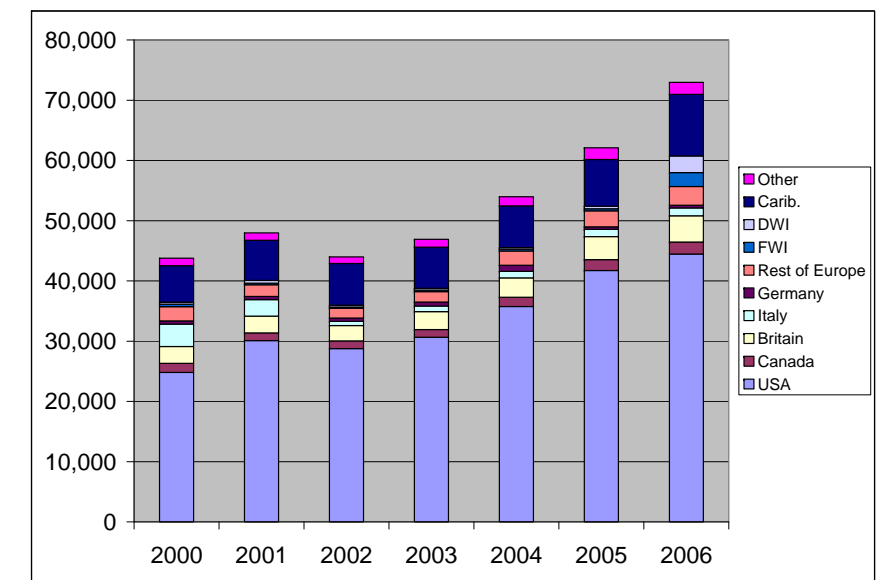


Exhibit II-3. Tourist Arrivals by Country of Residence 2000-2006

Anguilla travel and tourism is expected to generate USD \$159.4 million of economic activity (total demand) in 2007<sup>3</sup> compared to \$157.5 million in 2006.

The substantial growth of the tourism industry in Anguilla, beginning in 2005, has resulted in the development, or planned development of new hotels and other tourist destinations.

There are a total of 10 major resort residential tourism projects currently approved (under development or planned), with an

<sup>1</sup> Press Release: Review of Economic Activity in Anguilla in 2006 as published by the Ministry of Economy Development, Investment, Commerce and Tourism, Statistics Department.

<sup>2</sup> Source: Immigration Department, table 6.2.9.

<sup>3</sup> World Travel and Tourism Council.



investment of \$3.24 billion (USD). These ten projects represent 4,350 rooms being developed between 2002 and 2026<sup>4</sup>. As there are five years between the beginning of the development of these 4,350 rooms and the present time, it is estimated that 488 of the current 1,175 available rooms were developed as part of these 10 projects; and that a total of 3,862 rooms remain to be developed between 2008 and 2026. This represents growth of over 229% over the 1,175 available rooms in 2007.

## B. Port Commercialisation

The Wallblake Airport and all Seaports of Anguilla are Government owned and are operated by the Ministry of Infrastructure, Communications, Utilities, Housing, Agriculture and Fisheries (MICUHAF).

In practice the Ports are largely run by the Customs who collect all ports, pier and tonnage dues and warehouse rents, operate the warehouses at Road Bay and previously at Blowing Point. They also collect port statistics and manage the port out of official hours.

In 2001 a Government-commissioned study done by Halcrow on the long term port development needs recommended the upgrade of the facilities at Blowing Point Ferry Port, the construction of a new cargo port at Corito Bay and the conversion of Road Bay into a small scale marine tourism facility. The report also recommended the need for a commercially oriented organisation to run the national Port system. A separate Authority in the form of a Statutory Corporation with the requisite supporting legislation was recommended as the way forward.

In January 2008, the Government of Anguilla through the MICUHAF issued a request for proposals for consultants to provide assistance in the development of legislation and an organisation structure that would eventually result in a separate Seaport/Airport Authority being created that would operate on a commercial basis. Hence, the financial feasibility of the Blowing Point Port Development Programme, as reflected in this Master Plan, presumes that revenue streams generated at the Port will remain within a Ports Authority, and not within the Government's consolidated fund.

## C. The Master Plan Methodology

The development of Master Plan is an interactive process of consulting with Terminal Ferry users, stakeholders and operators, gathering planning and design related data and assessing various

environmental, social and operational restrictions with the view of formulating a feasible and practical Development Programme that can be reasonably implemented over time to meet the 20 year forecasted demands.

In developing the Master Plan, our Team consulted with persons designated by the Ministry (MICUHAF). During the week of the 20<sup>th</sup> August 2007, our Team visited the Blowing Point Ferry Port and interviewed its management, and various government and quasi government group officials as well as additional stakeholders. Port operations and facilities inventory were reviewed in collaboration with Port management with the objective of understanding how passengers are processed and whether existing facilities could be re-used and/or upgraded.

From the information collected, we performed a demand/capacity analysis to forecast the level of passenger activity for the planning year 2027 and then to determine the requirements for new Terminal and Landside facilities.

On the 9<sup>th</sup> October 2007, a Goals/SWOT workshop took place with Ministry Officials and members of the Port Board. Subsequently on the 10<sup>th</sup> October 2007, the workshop was repeated as a general consultation process with Government Ministers/Officials, Port Board members and stakeholders at large being present. To stimulate participation Jacobs representatives provided a presentation as to what was considered to be the Port's levels of service, commercial goals and development programme requirements.

From the forecast activity levels for the Blowing Point Ferry operations and the result of the workshops, a statement of operational requirements was established for terminal and landside facilities from which a detailed Programme was established for a new Terminal Building.

An Inception Report was submitted in October 2007, which consolidated the collection of information, study analysis and recommended a Development Programme. The Report was reviewed and subsequently accepted by the Ministry.

The Development Programme (Terminal & Landside) was used by the Architect, Queen's Quay Architect, to develop two Terminal design concepts. Both concepts allowed the construction of a new Terminal onto existing Port lands.

Towards the end of November 2007, Jacobs and its Architect presented the two design concepts to Government Ministers, senior Officials and members of the Port Board. The discussion resulted in the GOA selecting a preferred Terminal design concept. Subsequently, the selected design was updated to reflect

additional input received during our meeting with Government and Port Board as well as the Team's internal review process.

Based on the selected design option, a preliminary Environmental Assessment of the proposed development was conducted in order to identify social and environmental impacts that could possibly occur during construction and subsequently during Port operations. In parallel, the Team's quantity surveyors, Cooper Kauffman Limited of Barbados, prepared an estimate of costs for the development of the selection Terminal design option.

By mid January 2008, a draft Master Plan was submitted, which included all of the study works completed to that point with the view of obtaining additional input from the GOA and CDB prior to conducting the Master Plan financial and economic analysis.

Towards the end of January 2008, the draft Master Plan was accepted by the GOA as meeting their requirements for the Blowing Point Ferry Port.

Our Team subsequently completed the required financial and economic analysis and a draft report was submitted in February 2008. The GOA and CDB provided review comments and instructed Jacobs to complete the Master Plan.

The draft Master Plan including its Feasibility Study was submitted in February 2008 for approval. The Final Master Plan was completed in March 2008.

## D. Historical Port Traffic

### 1. Introduction

To develop a long range forecast of traffic moving through the Blowing Point, the following factors were examined:

- Historical trends at Blowing Point Port;
- The development of tourism in Anguilla as well as throughout the Caribbean;
- The economic development of Anguilla and other significant market segments; and
- The potential risks to traffic growth.

### 2. Historical Passenger Traffic

As shown in Exhibit II-4, 2007 year-to-date (January – May) total passenger arrivals and departures to Anguilla by sea<sup>5</sup> represent 82% of the combined total passenger arrivals by Sea and Air. Of

<sup>4</sup> Table "approved projects" as provided by the Anguilla Tourist Board.

<sup>5</sup> BP MP file.





those 'by Sea' arrivals, approximately 84% are through Blowing Point<sup>6</sup>. Total passengers include residents and visitors.

**Exhibit II-4. 2007 YTD Passenger Traffic**

2007 (January - May)	
Total Anguilla passenger arrivals / departures by sea and air	271,959
Total Anguilla passenger arrivals / departures by sea	223,363 82%
Total Blowing Point passenger arrivals / departures by sea	188,176 84%

**Annual Traffic**

By Sea passenger data is available from 1989 through 2006. Estimates for historical passenger traffic at Blowing Point is based on 84% of the total 'by Sea' passenger traffic in Anguilla. Exhibit II-6 depicts the estimated total passenger traffic at Blowing Point during this time period.

Total passenger traffic increased at an average annual rate of 8.08% between 2002 and 2006, which is double the average growth rate of the previous ten and fifteen year periods. There was a significant decline in traffic in 1995 and 1996 due to hurricane Luis, followed by a sharp increase in 1997. Since 1998, there have been two periods of decline 1999 and 2001 due to hurricane Lenny (Ref. Hurricane Hazards in Anguilla by GeoSY Ltd July 2005). Thereafter traffic increased at double digit rates in 2004 and 2006.

Actual 2005 and 2006 resident and visitor arrival data for Blowing Point are available, and when combined for a total passenger count, are 7 and 9% respectively, higher than previous study estimates; Exhibits II-5 and II-6. The historical estimates are therefore shown to indicate growth rates, and order of magnitude totals only.

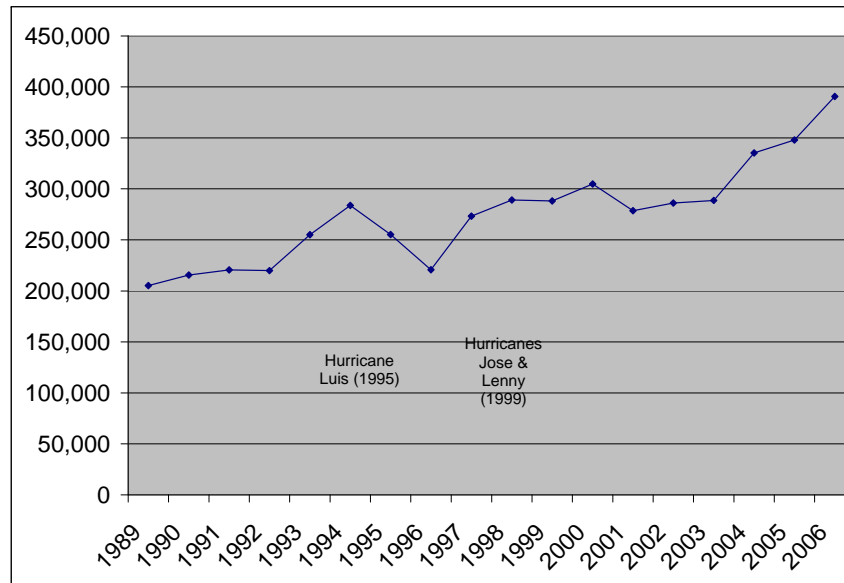
**Peak Times**

**Peak Month**

The months of April, August and December are considered by the Department of Immigration to be the busiest at Blowing Point. Passenger traffic data received for December 2006 and April 2007 was in the range of 41,000 – 42,000 passengers. The partial data received for August 2007 would indicate an expected 45,000 – 46,000 passengers.

<sup>6</sup> 84% of the Annual Pax Arrival and Departures By Sea, as provided in table 6.2.15, prepared by the Statistics Department.

In December, the peak time relates to pre-Christmas shopping; in April it relates to Easter; and in August, it relates to an Island Festival in the first week of the month.



**Exhibit II-5. Estimated Historical Passenger Traffic at Blowing Point (arrivals and departures)**

**Peak Day**

As shown in Exhibit II-8, the maximum number of passengers seen on a given day over the peak months, is 2,559 (August 2007); the fewest being 503.

Exhibits II-9, II-10 and II-11 summarize the trends during the three peak months for which recent data was received. There are variable peaks during the month.

It appears from Exhibit IV-9, that Saturday is the busiest day of the week, except in the summer.

**Composition of Current Passenger Traffic**

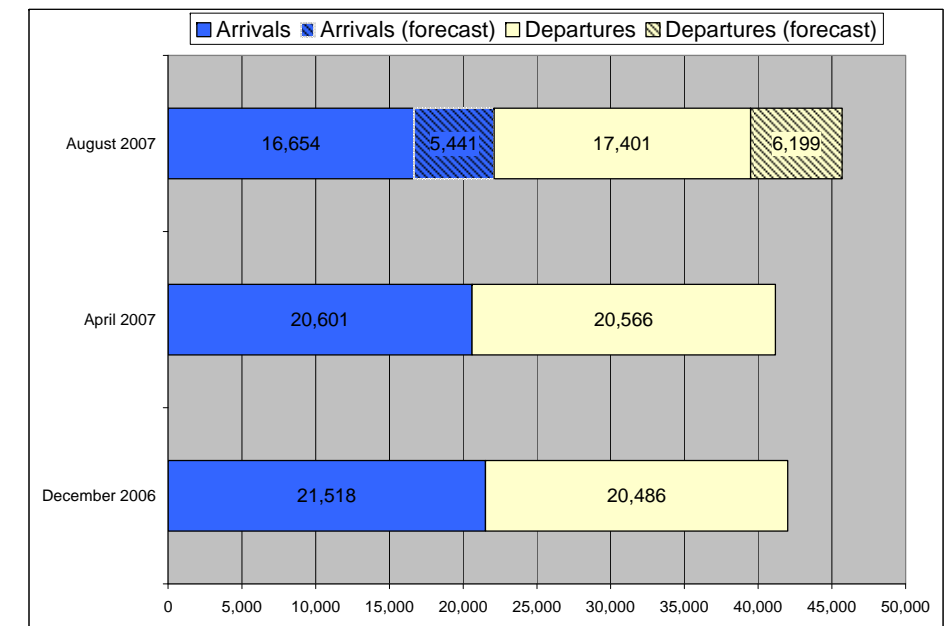
Passenger data for those travelling by sea, specifically those passing through Blowing Point, are segmented by residents and visitors, and their distribution is fairly equitable.

**Exhibit II-6. Passenger Arrivals and Departures**

	BY SEA (all ports)			BY SEA (Blowing Point) - Estimated			% Change
	Arrivals	Departures	TOTAL	Arrivals	Departures	TOTAL	
1989	124,137	120,096	244,233	104,275	100,881	205,156	
1990	131,203	125,419	256,622	110,211	105,352	215,562	5.07%
1991	133,041	129,539	262,580	111,754	108,813	220,567	2.32%
1992	133,915	127,826	261,741	112,489	107,374	219,862	-0.32%
1993	154,024	149,663	303,687	129,380	125,717	255,097	16.03%
1994	171,292	166,586	337,878	143,885	139,932	283,818	11.26%
1995	153,687	150,169	303,856	129,097	126,142	255,239	-10.07%
1996	133,546	129,253	262,799	112,179	108,573	220,751	-13.51%
1997	164,830	160,560	325,390	138,457	134,870	273,328	23.82%
1998	174,482	169,850	344,332	146,565	142,674	289,239	5.82%
1999	173,697	169,256	342,953	145,905	142,175	288,081	-0.40%
2000	183,808	178,984	362,792	154,399	150,347	304,745	5.78%
2001	169,013	162,619	331,632	141,971	136,600	278,571	-8.59%
2002	172,649	168,087	340,736	145,025	141,193	286,218	2.75%
2003	174,545	169,207	343,752	146,618	142,134	288,752	0.89%
2004	202,181	197,028	399,209	169,832	165,504	335,336	16.13%
2005	209,895	204,265	414,160	176,312	171,583	347,894	3.75%
2006	236,216	228,751	464,967	198,421	192,151	390,572	12.27%
2007 (Jan-May)				95,555	92,621	188,176	

	Total Change	Avg. p.a.
1989-2006	90.38%	3.86%
1992-2006	77.64%	4.19%
1997-2006	42.90%	4.05%
2002-2006	36.46%	8.08%

Years 1989 - 2006 = 84% of 'By Sea' Totals - Table 6.2.15  
2007 YTD = actuals from BP MP



**Exhibit II-7. Peak Month Passenger Arrivals and Departures at Blowing Point**



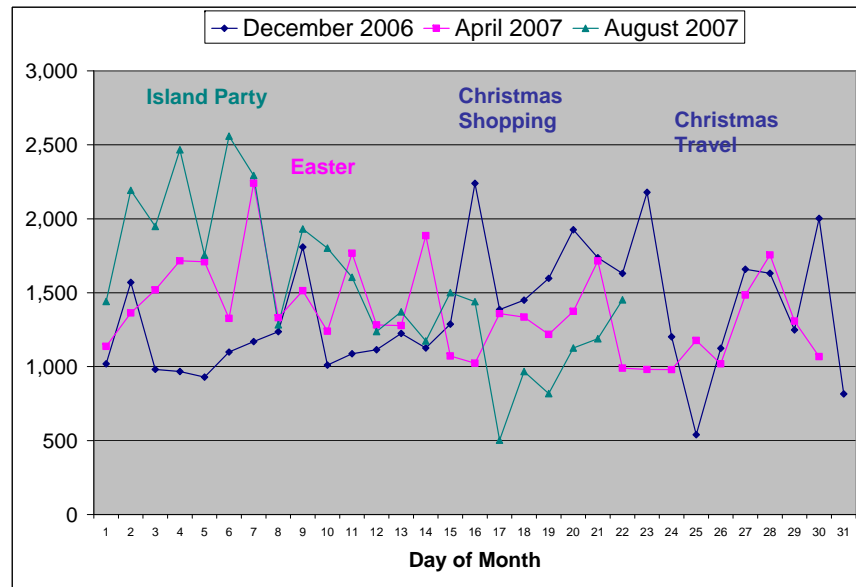


Exhibit II-8. Peak Day Arrivals and Departures at Blowing Point

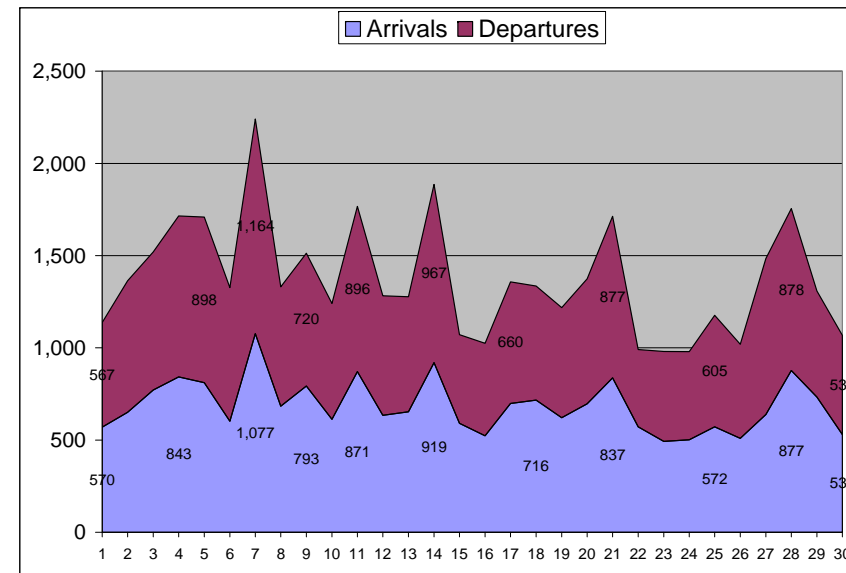


Exhibit II-10. April 2007 Passenger Arrivals and Departures at Blowing Point

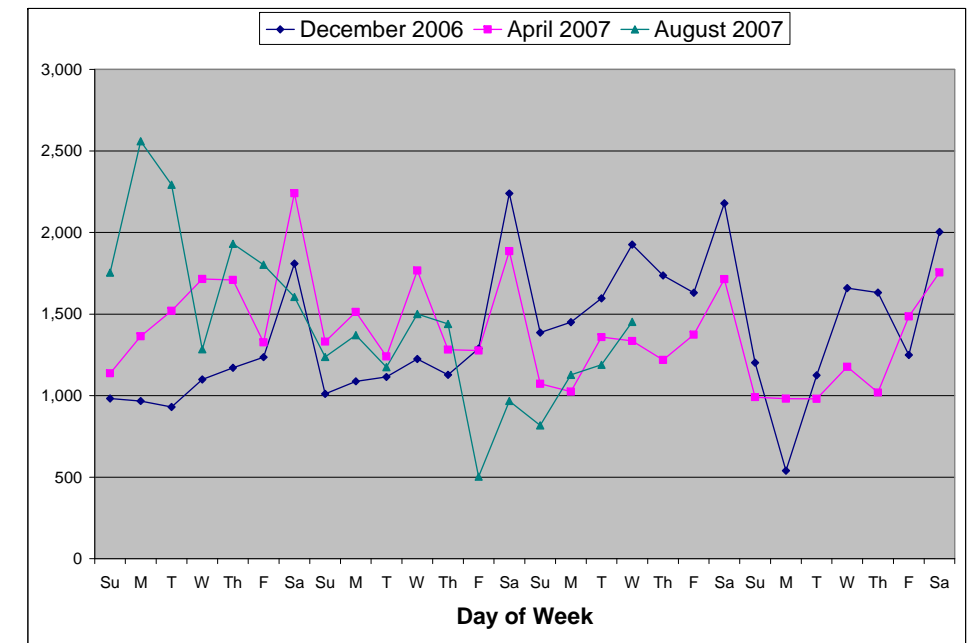


Exhibit II-12. Peak Passenger Day of Week at Blowing Point

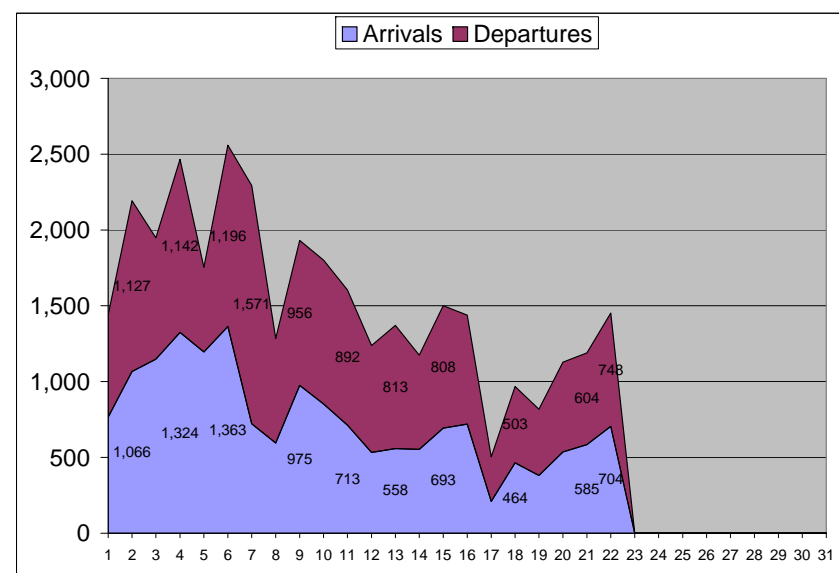


Exhibit II-9. August 2007 (partial month) Passenger Arrivals and Departures at Blowing Point

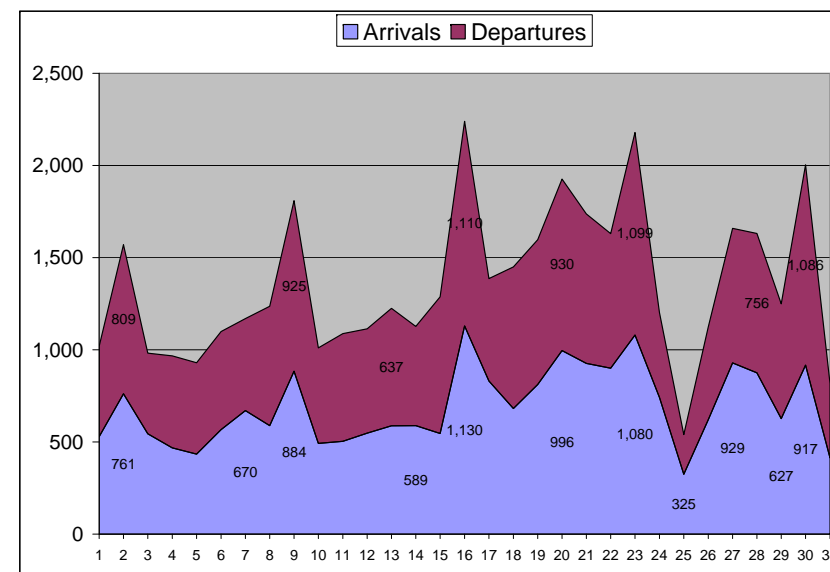


Exhibit II-11. December 2006 Passenger Arrivals and Departures at Blowing Point

Exhibit II-13. Passengers at Blowing Point

	Residents	Visitors	Total	Residents	Visitors
2005	186,326	186,764	373,090	49.9%	50.1%
2006	199,793	224,774	424,567	47.1%	52.9%

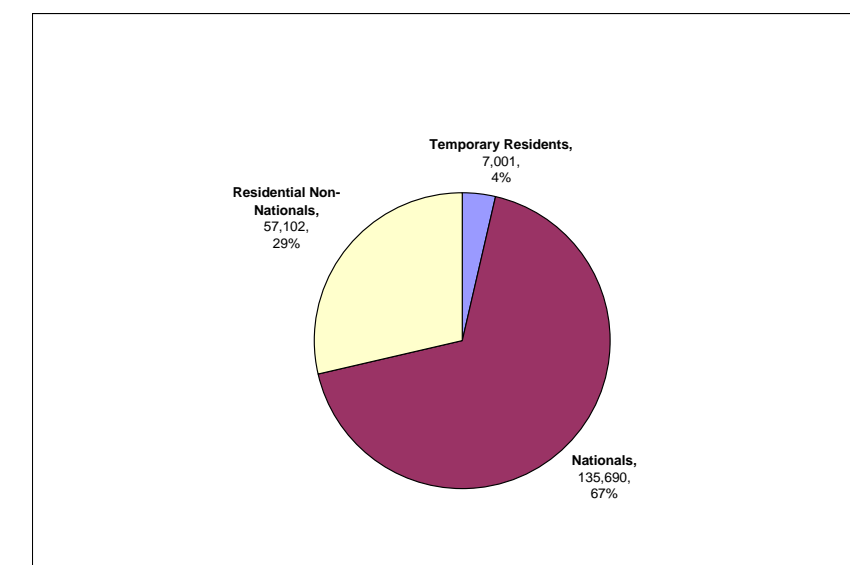


Exhibit II-14. 2006 Blowing Point Resident Arrivals / Departures

There were 199,793 resident arriving and departing passengers who passed through Blowing Point in 2006<sup>7</sup>. This is an increase of 7% over 2005 (186,326 passengers). Residents comprise

temporary residents, nationals, and resident non-nationals. In 2006, the majority of residential passenger traffic at Blowing Point was by Anguillan nationals with 67% of the total resident passenger traffic; followed by residential non-nationals at 29%, and temporary residents at 4%. The distribution of residential passenger traffic is similar to that found in 2005, and the year-to-date results for 2007; reference Exhibit II-14.

<sup>7</sup> Source: 2005, 2006, 2007 Resident Arrival Departure Data as provided by the Anguilla Government Statistics Department.



**Visitors**

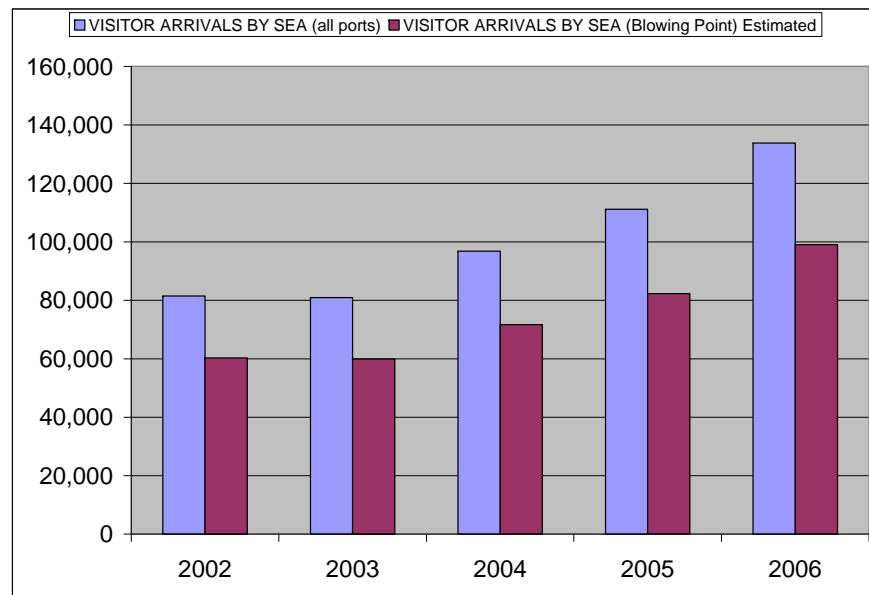
The Anguillan Government (be it the Immigration Department, or the Department of Statistics), maintains much data on visitors; although most data is maintained on arrivals only. It is assumed that an equivalent number of departures take place.

In 2006, there were a total of 133,794 visitors arriving by sea<sup>8</sup>. Using partial 2007 actual data for Blowing Point, it is estimated that approximately 74% of the visitors arriving by sea, travel through Blowing Point.

It is therefore estimated that in 2006, a total of 99,008 visitors arrived at Blowing Point; or a total of 198,016 arriving and departing visitors. Visitor arrivals at Blowing Point grew 20.35% for the period 2005-2006, and 14.8% between 2004 and 2005; reference Exhibits II-15 and II-16.

**Exhibit II-15. Distribution of Arriving Visitors (2007)**

January - May 2007	
Total Visitor Arrivals by Sea	68,359
Visitor Arrivals by Sea through Blowing Point	50,531



**Exhibit II-16. 2002-2006 Arriving Visitors**

**Type of Visitor**

Visitors are segmented as either tourists (overnight visitors) or excursionists (day trippers). Data provided by the Immigration Department on visitor arrivals by sea are summarized in tables 6.2.6 and 6.2.19. The majority of visitors that travel to Anguilla by sea are excursionists.

**Exhibit II-17. Visitor Arrivals to Anguilla – By Sea**

	Tourist	Excursionist	TOTAL
2003	19,478 24%	61,473 76%	80,951
2004	23,058 26%	65,906 74%	88,964
2005	31,665 28%	79,504 72%	111,169
2006	41,084 31%	92,710 69%	133,794

During the five year period between 2002-2006, an average of 45% of all **overnight tourists** arriving by either air or sea arrived by sea, with the remaining 55% arriving by air. In 2006, the distribution was the reverse however, with 56% (41,084) of the total 72,962 tourist arrivals being by sea, and 44% (31,878) by air. As shown in Exhibit II-17, all the recent growth has been in the visitors arriving 'by sea'. Year-to-date data for 2007 (January – May) has recorded 19,355 tourists at Blowing Point, which represents 83% of the total tourist arrivals by sea (23,203) for the same period, and 38% of total visitor arrivals (50,531) through Blowing Point.

**Exhibit II-18. Overnight Tourist Arrivals in Anguilla**

	TOURIST ARRIVALS				TOURIST ARRIVAL GROWTH	
	By Sea	By Air	Total		By Sea	By Air
2002	15,341 35%	28,628 65%	43,969	-	-	
2003	19,478 42%	27,437 58%	46,915	27%	-4%	
2004	23,058 43%	30,929 57%	53,987	18%	13%	
2005	31,665 51%	30,419 49%	62,084	37%	-2%	
2006	41,084 56%	31,878 44%	72,962	30%	5%	

Source: Table 6.2.6 Immigration Department

During the four year period between the years 2003-2006, an average of 98.4% of all **excursionists (day trippers)** arriving by either air or sea arrived by sea, with the remaining 1.6% arriving by air. In 2006, there were a total of 92,710 excursionists arriving by sea; 62,523 (67%) of these at Blowing Point. Year-to-date data for 2007 (January – May) has recorded 31,176 excursionists at Blowing Point which represents 69% of the total excursionist arrivals by sea during the same time period.

**Exhibit II-19. Excursionist Arrivals to Anguilla**

	EXCURSIONIST ARRIVALS					EXCURSIONIST ARRIVAL GROWTH		
	By Sea		By Air	Total		BP	SG	By Air
	Blowing Point	Sandy Ground						
2003	47,451 76%	14,022 22%	894 1%	62,367	-	-	-	
2004	56,188 84%	9,718 15%	895 1%	66,801	18%	-31%	0%	
2005	68,278 84%	11,226 14%	1,598 2%	81,102	22%	16%	79%	
2006	62,523 66%	30,187 32%	1,573 2%	94,283	-8%	169%	-2%	

Source: Table 6.2.19 Immigration Department

**Purpose of Trip**

Year-to-date data for 2007 (January – May) indicates that there were a total of 68,359 by sea visitor arrivals; of these, 66,682 (97.5%) arrive for vacation purposes while the remaining 1,677 (2.5%) arrived for business

The same data also indicates that of the total 50,531 visitor arrivals at Blowing Point, 97% (48,868) travel for vacation purposes; while the remaining 3% (1,663) travel for business.

**Vessel Movements**

The Immigration Department collects data on the number of passenger aircraft and boats arriving and departing Anguilla. Passenger boats (ferries, yachts and excursions) account for 65-73% of the total craft movements. Data for 2007 (January-March) indicates a 31:69 distribution airplane/boat.

**Exhibit II-20. Distribution of Craft Arrivals to Anguilla**

	Craft Arrivals & Departures to Anguilla				Craft Arrivals & Departures to Anguilla	
	Airplanes	Ferries	Yachts & Excursions	Total Boats	Airplanes	Total Boats
2002	12,258	16,583	6,087	22,670	35.1%	64.9%
2003	11,545	17,059	5,941	23,000	33.4%	66.6%
2004	12,121	20,752	6,817	27,569	30.5%	69.5%
2005	14,742	22,943	6,301	29,244	33.5%	66.5%
2006	14,859	31,599	8,430	40,029	27.1%	72.9%

Source: Immigration Department, Table 3.2.6

Blowing Point is the only passenger ferry port for Anguilla; while private yachts and cruise ships arrive at Sandy Ground. Some private charters also arrive at Sandy Ground.

For the period 2002-2006, ferries have accounted for over 70% of the total boats arriving and departing Anguilla, and this percentage has risen to a 2006 level of 79% (of the total 40,029 vessels).

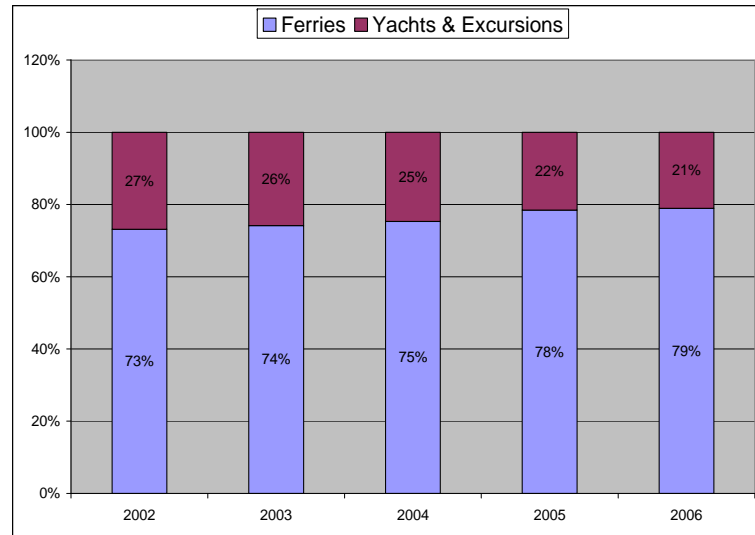
Total arriving and departing vessels in Anguilla in 2006 were 40,029. Total arriving and departing vessels at Blowing Point in 2006 were 26,962 (13,481 arrivals x 2); therefore vessel traffic at Blowing Point in 2006 is estimated to be 67% of the total vessel traffic on the island.

**Passenger Vessels**

Statistics on the number of passenger vessels arriving by port are recorded by the Customs Department. Passenger Boats into Blowing Point are usually 49 tons or less in weight.

<sup>8</sup> Source: Table 6.2.2 as compiled by the Immigration Department.





Source: Immigration Department Table 3.2.6

**Exhibit II-21. Distribution of Vessel Traffic in Anguilla**

It is assumed that for every arrival there is a departure, therefore the arrival figures have been multiplied by two to determine vessel movements at Blowing Point. Exhibits II-22 and II-23 show the trend at Blowing Point between the years 1990-2006.

**Exhibit II-22. Vessel Movements- Blowing Point**

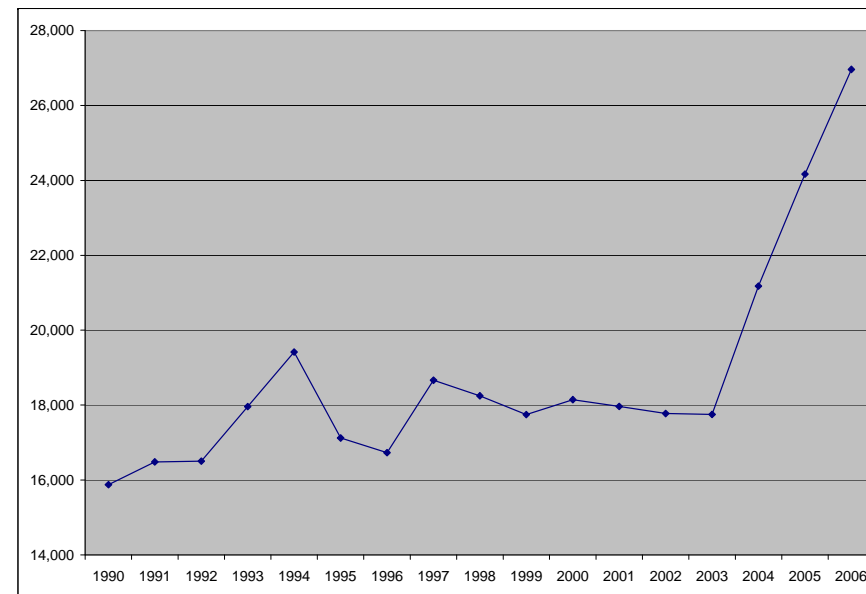
	Arrivals	Arrivals & Departures	% Change
1990	7,938	15,876	
1991	8,243	16,486	3.84%
1992	8,252	16,504	0.11%
1993	8,980	17,960	8.82%
1994	9,708	19,416	8.11%
1995	8,561	17,122	-11.81%
1996	8,366	16,732	-2.28%
1997	9,332	18,664	11.55%
1998	9,124	18,248	-2.23%
1999	8,873	17,746	-2.75%
2000	9,073	18,146	2.25%
2001	8,983	17,966	-0.99%
2002	8,887	17,774	-1.07%
2003	8,875	17,750	-0.14%
2004	10,589	21,178	19.31%
2005	12,083	24,166	14.11%
2006	13,481	26,962	11.57%

	Total Change (arr. & dep.)	% p.a.
1990-2006	69.83%	3.37%
2002-2006	51.69%	10.98%

Source: Immigration Department Table 3.2.7

Vessel movements at Blowing Point grew at an average annual rate of 3.4% between 1990 and 2006, and 11% for the period 2002-2006.

Immigration Department data (source table 3.2.6) indicates that there were 31,599 arriving and departing ferries in Anguilla in 2006; while a separate Immigration Department data source (table 3.2.7) indicates that there were 13,481 arriving vessels-crafts at Blowing Point in the same time frame i.e., ~ 26,962 arriving and departing vessels. Although Blowing Point is the only ferry port on the island, this data indicates a discrepancy of approximately 4,637 arriving and departing vessels at Blowing Point. We can only assume therefore that the 31,599 arriving and departing ferries figure also includes some passenger boats arriving and departing Sandy Ground.



**Exhibit II-23. Historical Vessel Movements (Arrivals + Departures) at Blowing Point**

**Blowing Point Ferries**

Blowing Point ferries serve St. Martin and St. Maarten. The ferries are all based in Anguilla. They depart every 30-45 minutes to the Marigot Bay Port of St. Martin, with the first ferry departing Anguilla at 7:00 hours and the last evening trip departing Marigot at 19:00 hours. The ferries also operate hourly to the Philipsburg Port of St. Maarten. The large ferries range in size from 80-135 passengers capacity. These ferries run daily; except when the waters are too rough (~ 1 day/year), and during hurricanes. There are 10 ferry owners of the 15 regularly scheduled ferry operators.

During the winter season (tourist season), three of the larger ferries travel to the St. Maarten about 2 trips a day for 3 days a week.

**Charters**

There are approximately 20-30 charter craft owned by 10 owners, providing a capacity of up to 12 passengers per craft. These charters leave on average every 15 minutes during the peak season (November – March).

Speed boats are also available.

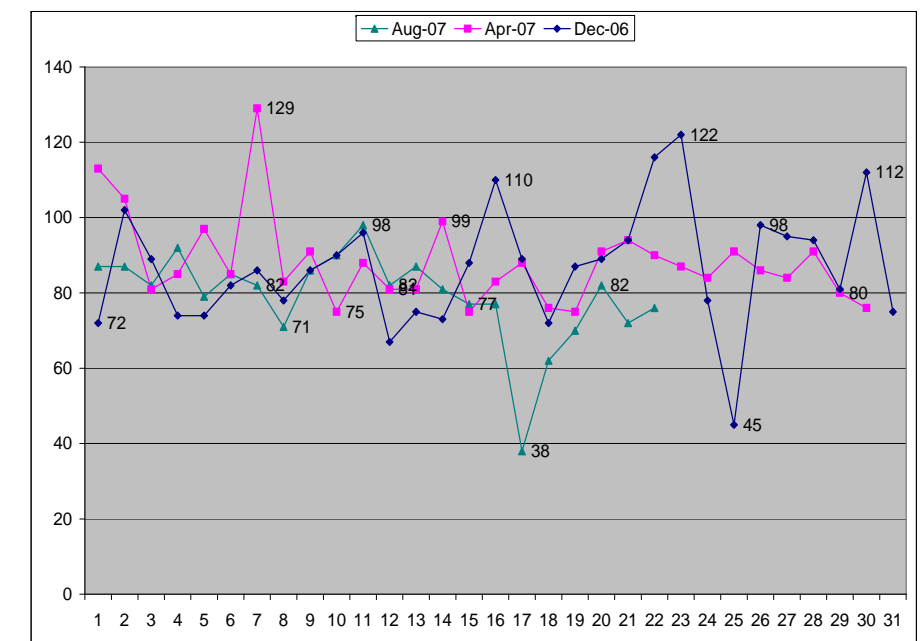
**Peak Times**

**Peak Month**

Using the Immigration Department’s handwritten logs for the months of August 2007 (partial month), April 2007 and December 2006, we note that craft movements in the peak months are in the order of 2,500–2,700/month.

**Peak Day**

As shown in Exhibits II-24 and II-25, Saturday is the peak day of the week, with craft movements varying between 120 and 130 (lower in August using data from the first half of August 2007).



**Exhibit II-24. Peak Day of Month Vessel Movement**



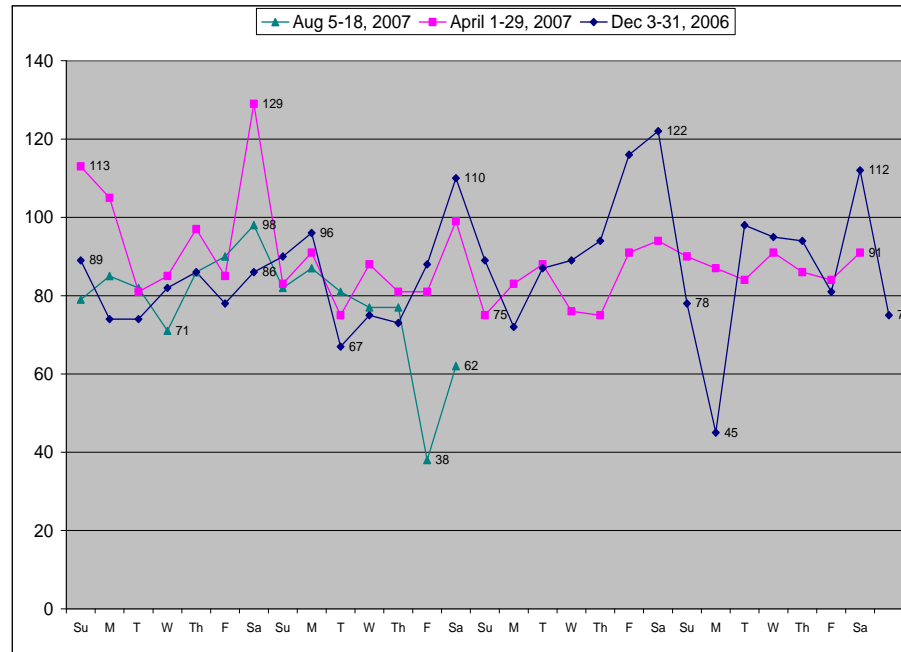


Exhibit II-25. Peak Day of Week Craft Movements

## E. Anguilla Passenger Forecasts

The Blowing Point Ferry Terminal serves St Martin, and also has a small commercial port handling small craft trading between Anguilla and St. Martin. There is only a narrow channel to give access to the open sea; therefore cruise ship traffic is currently limited to once per month during the tourism season. However, passengers are cleared by immigration and customs on board and circumvent the Ferry Terminal at Blowing Point.

### 1. Previous Forecasts

As reported in the Halcrow report of 2002<sup>9</sup>, traffic forecasts for both visitors and residents were completed based on Immigration Department data. Total passenger traffic through Seaports was estimated to grow by 31% by 2010 and 57% by 2020, over 2001 levels; representing an average growth rate of 4.2% p.a. between 2001 and 2005, and 2.1% p.a. for the period 2005-2020. Residential traffic was expected to grow at 2.5% p.a. for 2005-2020, and visitor traffic at 1.5% p.a.

In reality, there were 414,160 total 'by sea' passengers arriving/departing Anguilla in 2005, or 6% higher than the Halcrow forecasts.

<sup>9</sup> Anguilla Port Development and Management Study, Final Report November 2002, Halcrow Group Limited, p. 51.

Exhibit II-26. Halcrow Forecasts (2002)

	BY SEA PASSENGERS TO/FROM ANGUILLA (all ports)				
	Actual 2001	Forecast 2005	Forecast 2010	Forecast 2015	Forecast 2020
<b>Visitors</b>	146,000	177,000	191,000	205,000	219,000
<b>Residents</b>	186,000	214,000	244,000	273,000	303,000
<b>Total</b>	<b>332,000</b>	<b>391,000</b>	<b>435,000</b>	<b>478,000</b>	<b>522,000</b>
<b>Growth Factor (from 2001)</b>		17.8%	31.0%	44.0%	57.2%
<b>Average Annual Growth (from 2001)</b>		4.2%	3.0%	2.6%	2.4%

### 2. Factors Affecting Growth

Economic conditions, and in particular GDP growth are known to be the major drivers in transportation travel. Examination of the Blowing Point passenger data with US GDP indicates that this relationship is weak for overall passenger traffic ( $R^2$  value of 0.0957) from 2000-2006, but very strong for visitor traffic (by Sea), with an  $R^2$  value of 0.9268 for the period 2004 to 2006<sup>10</sup>.

The availability of tourism infrastructure is essential for the continued growth in traffic. As stated previously, significant new investments are occurring or are at the planning stage, including an additional 4,350 hotel rooms between 2002 and 2026.

#### Economic Growth of Visiting Nations

More than half (53%) of the passenger traffic at Blowing Point is by visitors, and more than 60% of these visitors are American. Visitor traffic is expected to therefore be strongly tied to US GDP. The Economist<sup>11</sup> forecasts US GDP to grow at 1.9% in 2007 and at 2.1% in 2008; while the US government forecasts the US GDP (real) to grow at 2.7% in 2007, 3.0% in 2008, 3.1% in 2009, 3.0% in 2010 and 2011, and 2.9% in 2012<sup>12</sup>.

### 3. Potential Risks Affecting Traffic

#### Wallblake Airport Runway Extension

It is understood that there are discussions currently taking place regarding the potential of extending the runway at the Wallblake Airport (AXA), to 6,000' which would allow a B737 flight to Miami. The existing runway is 5,440' long and was rebuilt and extended in early 2005. Current destinations served by scheduled carriers include San Juan, Puerto Rico (American Eagle), St. Barthelemy (Coastal Air), Antigua and St. Thomas (LIAT), and St. Maarten (Winair).

<sup>10</sup>  $R^2$  = proportional variation in passenger traffic explained by GDP.

<sup>11</sup> [www.theeconomist.com](http://www.theeconomist.com)

<sup>12</sup> US GDP (real) forecasts as published at [www.economist.com](http://www.economist.com)

The largest aircraft used is a 67-seat ATR-72 serving San Juan twice daily and a Dehavilland DHC-8-100 with one flight per day to Antigua and to St. Thomas. Other aircraft are small nine-seat aircraft. Total weekly departing seat capacity was 1,791 in August 2007.

If and when an extension takes place it is likely that the number of tourists (overnight visitors) passing through Blowing Point would be reduced. That said, the airport lands are restricted and therefore a further extension to the runway may not be permitted.

#### Weather

As outlined by Dr. Simon Young in a 2005 report on the Hurricane Hazards in Anguilla, Anguilla is a low-lying island in an area in the heart of the Atlantic hurricane belt and has one of the highest hurricane exposures in the entire Atlantic Basin. Although Anguilla has only severely affected by two hurricanes in the past 50 years (Donna in 1960 and Luis in 1995), and moderately affected by Lenny in 1999, the report concludes that hurricanes represent a frequent and severe hazard to Anguilla, particularly from the coastal hazards that accompany hurricanes – namely storm surge and wave action. The report concludes that given the likely continued high level of hurricane activity in the Atlantic for the next 20 years and also the growing impacts of climate change which will lead to greater vulnerability on islands such as Anguilla, combined with the dramatic increase in coastal infrastructure (mostly tourism related), and the growing reliance of the Anguillan economy on tourism, that the hurricane risk in Anguilla should be regarded as very high.

Historical records suggest that Anguilla can expect Category 3 or above winds (> 110 mph) on average every 20 years, Hurricane force winds (> 73 mph) every 7 years, and Tropical Storm force winds (> 38 mps) every 2-3 years. Winds of Category 4 and higher have great destructive potential even in the modern built environment; and these have a return period of less than 100 years in Anguilla.

#### Entry/Exit Requirements

##### Passports

- All visitors arriving on the island of Anguilla must present a passport that is valid for at least six more months.
  - USA.** Previously, citizens of the United States were able to enter Anguilla with proof of U.S. citizenship, such as a birth certificate or driver's license. However, the United States government has recently issued a statement that requires all U.S. citizens to have a valid passport to travel to Caribbean Islands, including Anguilla. U.S. citizens will be required to present their passport upon return to the



States. All travelers must also show proof of a return or onward ticket in order to gain access to Anguilla.

- **French Caribbean Islands.** Effective July 2005, all travelers to French St. Martin were required to carry a valid passport. Anguillans therefore either require an Anguillan British Overseas Territories Citizen (BOTC) passport or a British Citizen passport, in order to travel without a French visa. Anguillans traveling on an Anguillan passport will not require a French visa to enter French St. Martin; however they will continue to have to obtain a French visa to enter metropolitan French and the French Caribbean islands of Guadeloupe, Martinique and St. Barts. British Citizens and other EU passport holders do not require a visa to travel to the EU or the French Caribbean islands.

It is assumed that the tourists visiting Anguilla are likely more affluent and travel frequently; and therefore likely hold a valid passport.

#### Visas

- Citizens of the United States, the United Kingdom, and Canada do not need a visa to enter Anguilla, as long as they plan to stay in the country for no more than six months.
- Those who are traveling to Anguilla for diplomatic or official business are exempt from visa requirements.

#### Terrorism

The events of 9/11/2001 and other incidences of global terrorism, particularly those focusing the transportation industry have had a negative effect on people's willingness to travel. However, the direct effect of these attacks is not as large as one would suspect. When examining the number of arriving passengers at Blowing Point, shown in Exhibit II-6, it becomes evident that the events of 9/11 had a much less significant affect on deplaned passengers than the economic downturn of 2002-2003. The smaller effect of the 9/11 attacks would also be in part a result of the relative safety of Anguilla with its low terrorist threat exposure. The negative impact of terrorism rather than the terrorist attack itself appears to more adversely affect the tourism and travel industries. Needless to say, efforts to increase the security and safety of travelers are significant in decreasing the risk of terrorism locally, and bettering the reputation of the country.

#### Crime

According to the US Department of State, while Anguilla's crime rate has been relatively low for the past several years, there has recently however been a notable increase in both petty and violent crimes.

#### Saturation Point

Anguilla is a small island, and can only accommodate so many people (residents and tourists). Although this saturation point is unknown, it is assumed that the approved hotel projects list takes this into account. Using this approved project list of 4,000 beds (hotels and condos), and assuming overnight visitors stay at least 1 week in Anguilla, a total of 5,000 arriving visitors through Blowing Point is not unreasonable.

#### Mass Market Tourism

Anguilla focused on the high-end tourism product. There is likely a point at which there are only so many tourists that can be accommodated on the island without affecting the quality of the luxury tourism product. As Anguilla grows the tourism market and builds tourism infrastructure (including transportation infrastructure), it risks becoming more and more of a mass-market tourism destination. If Anguilla wants to remain a luxury destination, it needs to constrain the number of visitors by either constraining infrastructure development, or by raising prices.

#### St. Maarten/St. Martin Losing Its Place as a Tourist Destination

Although highly unlikely, if St. Maarten and St. Martin were to lose its place as a major tourist destination, the number of visitors passing through Blowing Point could decrease rather than increase as is forecast. Jet Blue recently announced plans to start serving St. Maarten and Puerto Plata from New York Kennedy in January 2008, and perhaps additional Caribbean markets. Air Tran also plans to add a new Caribbean destination by the end of 2007, although no details on location were provided<sup>13</sup>. The Caribbean Tourism Organization's 2006 statistics (published June 2007) do however indicate that there was no change in non-resident tourist (stop over) air arrivals to St. Maarten between 2005-2006; that there was a decline in tourist arrivals from the US (-0.3%) and from Canada (-11.2%) but an increase from Europe (3.5%) and other countries (1.5%); and that cruise passenger arrivals declined 3.4%. These trends however are reversed for the first seven months of 2007 with overall non-resident tourist (stop-over) arrivals by air declining 0.7%, tourist arrivals increasing from the US (2.4%) and Canada (4.3%), and decreasing from Europe (-3.2%) and other (-9.9%); while cruise passenger arrivals increased 1.2%. The World Tourism Organization's Tourism Market Trends Report (2006 Edition) indicates that St. Maarten has consistently held between 2.4 and 2.6% of the total Caribbean international tourism market for the past five years, although in 2005 it dropped to 2.4% from 2.6% in 2004.

#### US Opens Travel to Cuba

Currently US nationals are not allowed to travel to Cuba. It is probable that the political situation in the US will change within the next 10-20 years and that the US will permit its citizens to travel to Cuba. Judging from the proportion of Canadians and Europeans that travel to Cuba, approximately 25%, at least one quarter of all US tourists to the Caribbean will also chose to travel to Cuba. The proportion may possible be higher than 25% as there is a large Cuban-American population in the US who would wish to visit relatives as well as engage in tourist activities. Anguilla is an upscale market therefore the effects of the US opening travel to Cuba would most likely only have a minor affect if at all – perhaps a 5% decline in overnight visitors and 10% in excursionists.

## F. Blowing Point Port Forecasts

#### Forecast Passengers

Passenger forecasts for Blowing Point have been developed for Base, Low and High Case scenarios. The differences between the three scenarios are listed below. Passenger forecasts using standard linear regression are also shown.

#### Linear Regression

Using historical passenger data for 'by sea' arrivals and departures to Anguilla from 1989 to 2006, passenger traffic at Blowing Point is estimated (see Exhibit II-27). Passenger growth at Blowing Point is forecast using linear regression, with no accounting for population growth, or the Anguillan or US economy.

#### Base Case Scenario - A (without development at the Wallblake Airport)

Residential growth is tied to the Anguillan economy and population.

Moderately high Anguillan GDP consistent with construction of two-thirds of the planned hotel projects that have not already begun (rooms distributed evenly over the development period for each project, excluding the first 2 years); – GDP growth estimated at 15% in 2007, 21% in 2008, 17% in 2009, 15% in 2010, 12% in 2011, 11% in 2012, 10% in 2013, 9% in 2014, 5% between 2015-2017, 3% between 2018-2019, and 1% between 2020-2027.

<sup>13</sup> Aviation Daily October 16, 2007.





each project, excluding the first 2 years); – GDP growth estimated at 15% in 2007, 31% in 2008, 24% in 2009, 20% in 2010, 15% in 2011, 13% in 2012, 12% in 2013, 10% in 2014, 6% between 2015-2017, 3% between 2018-2019, and 1% from 2020.

- Population growth based on high migration i.e., 3.8% to 2011; dropping to 2.8% afterward
- Based on the above factors, the residential passenger growth rate used in the forecasts is 1/3 GDP growth rate for years 2007-2014, and the average of 1/3 GDP and the population growth rate for years 2015-2027:
  - 5.0% in 2007
  - 10.3% in 2008
  - 8.0% in 2009
  - 6.7% in 2010
  - 5.0% in 2011
  - 4.3% in 2012
  - 4.0% in 2013
  - 3.3% in 2014
  - 2.4% in 2015
  - 2.8% between 2016-2017
  - 2.9% between 2018-2019
  - 1.9% between 2020-2027
- Visitor - Excursionist growth is tied to US GDP:
  - US GDP growth rate of 2.1% in 2007 and 3% onward
- Visitor – Tourist growth is tied to development of tourism projects (hotels and other accommodation):
  - Construction of all of planned hotel projects that have not already begun (rooms distributed evenly over the development period for each project, excluding the first 2 years; per schedule provided by the Anguilla Tourist Board<sup>14</sup>.
  - Tourism economy growth beyond 2017 is unknown but is estimated at 2.0% p.a.
- Typical low hurricane activity; and
- Continued levels of safety as well as no further global terrorist attacks of the magnitude to cause significant economic downturn.

#### High Case Scenario - B (with development at the Wallblake Airport)

- The only difference between High Case A and High Case B is that in High Case B, the Wallblake Airport is developed in 2012, including a runway extension. The impact is on tourists to Anguilla (overnight visitors):
  - ¼ of the overnight visitors (tourists) arriving by boat would switch to air travel in the first year (2012);
  - an additional ¼ of the tourists arriving by boat would switch to air travel in the second year (2013).

<sup>14</sup> It is believed reasonable to expect all of the approved hotel rooms to be constructed given that in 2006, there were 41,000+ visitor arrivals – if each stayed a week, there would be a requirement of 790 rooms – this is not far off the existing 1000 or so rooms.

#### Linear Regression Forecasts

Historical (estimated) and linear forecasts of arriving and departing passengers at Blowing Point over the period 1989 to 2027 are presented graphically and in tabular format. Although there is 17 years of historical data (estimates) upon which to conduct regression analysis; this forecasting method does not account for very recent and significant growth due to tourism.

Using this method, at the end of 2027, total arriving and departing passengers are estimated at 522,000. As stated earlier, actual resident and visitor data for 2005 and 2006 show that these historical passenger figures for Blowing Point (based on a % of by sea totals), are 7-9% lower than actual, which would bring the total up to approximately 569,000.

#### Base Case Forecasts – A (without development of the Wallblake Airport)

Historical and Base Case forecasts of arriving and departing passengers at Blowing Point over the period 2005 to 2027 are presented graphically and in tabular format. By the end of 2027, arriving and departing passengers are estimated at 941,862.

Average per annum passenger growth for the period 2007-2012 is estimated at 7.48%; and at 3.74% over the 20 year planning period.

#### Base Case Forecasts – B (with development of the Wallblake Airport)

Historical and Base Case forecasts of arriving and departing passengers at Blowing Point over the period 2005 to 2027 are presented graphically and in tabular format. By the end of 2027, arriving and departing passengers are estimated at 724,409.

Average per annum passenger growth for the period 2007-2012 is estimated at 5.5%; and at 2.4% over the 20 year planning period.

Under this scenario, whereby ½ of the tourists arriving by boat switch to air travel in 2013, an equivalent of 26 flights a week, or 4 a day would need to be added at the airport, assuming a narrow body jet aircraft a 80% load factor.

#### Low Case Forecasts

Historical and Low Case forecasts of arriving and departing passengers at Blowing Point over the period 2005 to 2027 are presented graphically and in tabular format. By the end of 2027, arriving and departing passengers are estimated at 750,576.

Average per annum passenger growth for the period 2007-2012 is estimated at 4.35%; and at 2.7% over the 20 year planning period.

#### High Case Forecasts – A (without development at Wallblake Airport)

Historical and High Case –A forecasts of arriving and departing passengers at Blowing Point over the period 2005 to 2027 are presented graphically and in tabular format. By the end of 2027, arriving and departing passengers are estimated at 1.1 million.

Average per annum passenger growth for the period 2007-2012 is estimated at 10%; and at 4.6% over the 20 year planning period.

#### High Case Forecasts – B (with development at Wallblake Airport)

Historical and High Case –A forecasts of arriving and departing passengers at Blowing Point over the period 2005 to 2027 are presented graphically and in tabular format. By the end of 2027, arriving and departing passengers are estimated at 832,613.

Average per annum passenger growth for the period 2007-2012 is estimated at 7.8%; and at 3.19% over the 20 year planning period

Under this scenario, whereby ½ of the tourists arriving by boat switch to air travel in 2013, an equivalent of 32 flights a week, or 5 a day would need to be added at the airport, assuming a narrow body jet aircraft a 80% load factor.

#### Scenario Summary

Exhibit II-33 summarizes the passenger forecasts under each scenario.





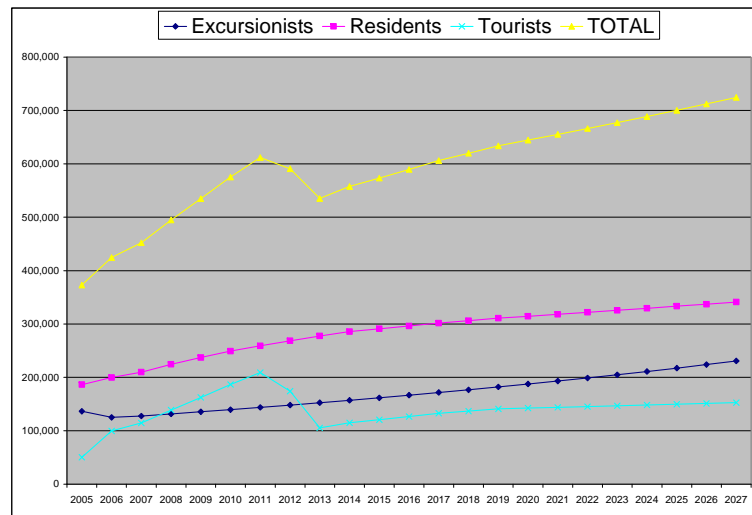


Exhibit II-29. Base Case B - Forecasts

	Excursionists	Tourists	Residents	TOTAL
2005	136,556	50,208	186,326	373,090
2006	125,046	99,728	199,793	424,567
2007	127,672	109,701	206,453	443,826
2008	131,502	120,671	213,335	465,508
2009	135,447	131,531	219,735	486,713
2010	139,511	143,369	226,327	509,206
2011	143,696	153,405	231,608	528,708
2012	148,007	164,143	237,012	549,162
2013	152,447	175,633	242,542	570,622
2014	157,020	186,171	247,393	590,585
2015	161,731	193,618	251,516	606,865
2016	166,583	201,363	255,708	623,654
2017	171,580	209,417	259,970	640,968
2018	176,728	213,606	262,630	652,964
2019	182,030	217,878	265,318	665,225
2020	187,491	220,057	267,591	675,138
2021	193,115	222,257	269,883	685,255
2022	198,909	224,480	272,195	695,583
2023	204,876	226,725	274,527	706,127
2024	211,022	228,992	276,879	716,893
2025	217,353	231,282	279,250	727,885
2026	223,874	233,595	281,643	739,111
2027	230,590	235,930	284,055	750,576

Total Change				
2007-2012	15.93%	49.63%	14.80%	23.73%
2007-2017	34.39%	90.90%	25.92%	44.42%
2007-2027	80.61%	115.07%	37.59%	69.12%
Per Annum Growth				
2007-2012	3.00%	8.39%	2.80%	4.35%
2007-2017	3.00%	6.68%	2.33%	3.74%
2007-2027	3.00%	3.90%	1.61%	2.66%

	Excursionists	Tourists	Residents	TOTAL
2005	136,556	50,208	186,326	373,090
2006	125,046	99,728	199,793	424,567
2007	127,672	114,687	209,783	452,142
2008	131,502	138,772	224,467	494,741
2009	135,447	162,363	237,187	534,997
2010	139,511	186,717	249,047	575,274
2011	143,696	209,123	259,008	611,828
2012	148,007	174,095	268,505	590,607
2013	152,447	105,327	277,456	535,230
2014	157,020	114,807	285,779	557,607
2015	161,731	120,547	291,019	573,297
2016	166,583	126,575	296,354	589,512
2017	171,580	132,903	301,787	606,271
2018	176,728	136,890	306,314	619,932
2019	182,030	140,997	310,909	633,936
2020	187,491	142,407	314,536	644,434
2021	193,115	143,831	318,205	655,152
2022	198,909	145,270	321,918	666,096
2023	204,876	146,722	325,674	677,272
2024	211,022	148,189	329,473	688,685
2025	217,353	149,671	333,317	700,341
2026	223,874	151,168	337,206	712,247
2027	230,590	152,680	341,140	724,409

Total Change				
2007-2012	15.93%	51.80%	27.99%	30.62%
2007-2017	34.39%	15.88%	43.86%	34.09%
2007-2027	80.61%	33.13%	62.62%	60.22%
Per Annum Growth				
2007-2012	3.00%	8.71%	5.06%	5.49%
2007-2017	3.00%	1.49%	3.70%	2.98%
2007-2027	3.00%	1.44%	2.46%	2.38%

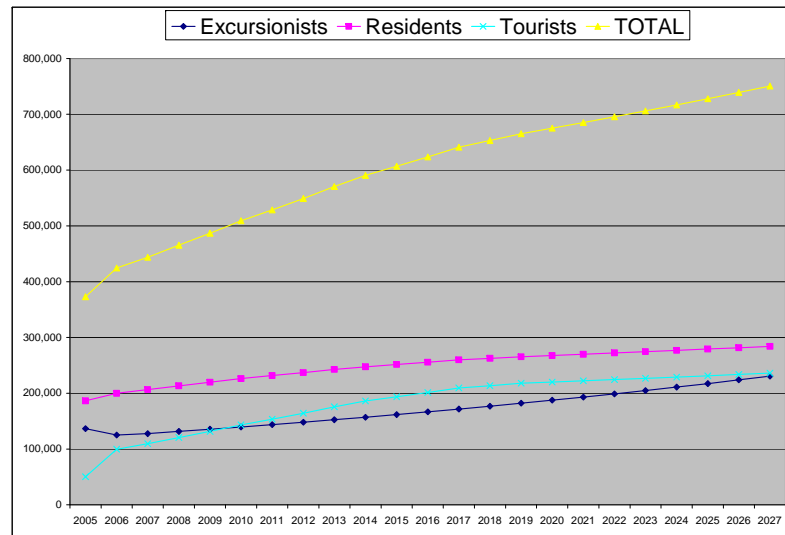


Exhibit II-30. Low Case Forecasts

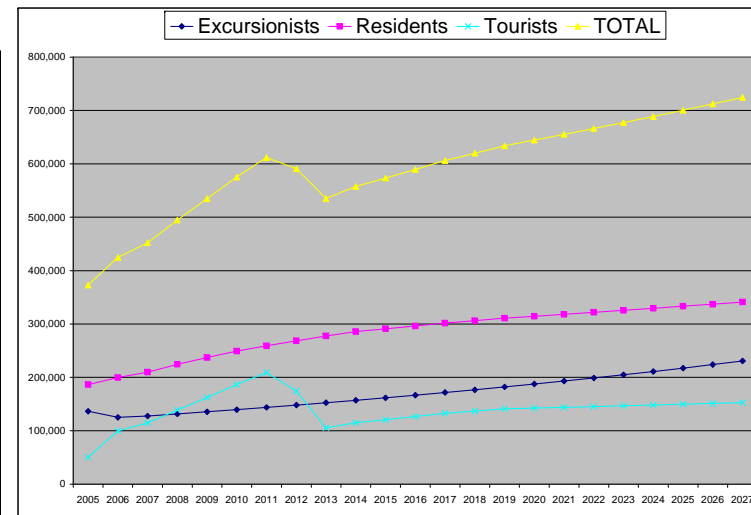


Exhibit II-31. High Case A Forecasts

	Excursionists	Tourists	Residents	TOTAL
2005	136,556	50,208	186,326	373,090
2006	125,046	99,728	199,793	424,567
2007	127,672	114,687	209,783	452,142
2008	131,502	150,240	231,460	513,203
2009	135,447	186,298	249,977	571,722
2010	139,511	223,557	266,642	629,710
2011	143,696	257,091	279,974	680,761
2012	148,007	217,885	292,106	657,998
2013	152,447	136,657	303,791	592,895
2014	157,020	150,323	313,917	621,261
2015	161,731	159,342	321,451	642,525
2016	166,583	168,903	329,166	664,652
2017	171,580	179,037	337,066	687,683
2018	176,728	184,408	343,470	704,606
2019	182,030	189,940	349,996	721,966
2020	187,491	191,840	355,479	734,810
2021	193,115	193,758	361,049	747,922
2022	198,909	195,696	366,705	761,310
2023	204,876	197,653	372,450	774,979
2024	211,022	199,629	378,285	788,937
2025	217,353	201,626	384,212	803,190
2026	223,874	203,642	390,231	817,746
2027	230,590	205,678	396,344	832,613

Total Change				
2007-2012	15.93%	89.98%	39.24%	45.53%
2007-2017	34.39%	56.11%	60.67%	52.09%
2007-2027	80.61%	79.34%	88.93%	84.15%
Per Annum Growth				
2007-2012	3.00%	13.70%	6.85%	7.79%
2007-2017	3.00%	4.55%	4.86%	4.28%
2007-2027	3.00%	2.96%	3.23%	3.10%

	Excursionists	Tourists	Residents	TOTAL
2005	136,556	50,208	186,326	373,090
2006	125,046	99,728	199,793	424,567
2007	127,672	114,687	209,783	452,142
2008	131,502	138,772	224,467	494,741
2009	135,447	162,363	237,187	534,997
2010	139,511	186,717	249,047	575,274
2011	143,696	209,123	259,008	611,828
2012	148,007	174,095	268,505	590,607
2013	152,447	105,327	277,456	535,230
2014	157,020	114,807	285,779	557,607
2015	161,731	120,547	291,019	573,297
2016	166,583	126,575	296,354	589,512
2017	171,580	132,903	301,787	606,271
2018	176,728	136,890	306,314	619,932
2019	182,030	140,997	310,909	633,936
2020	187,491	142,407	314,536	644,434
2021	193,115	143,831	318,205	655,152
2022	198,909	145,270	321,918	666,096
2023	204,876	146,722	325,674	677,272
2024	211,022	148,189	329,473	688,685
2025	217,353	149,671	333,317	700,341
2026	223,874	151,168	337,206	712,247
2027	230,590	152,680	341,140	724,409

Total Change				
2007-2012	15.93%	51.80%	27.99%	30.62%
2007-2017	34.39%	15.88%	43.86%	34.09%
2007-2027	80.61%	33.13%	62.62%	60.22%
Per Annum Growth				
2007-2012	3.00%	8.71%	5.06%	5.49%
2007-2017	3.00%	1.49%	3.70%	2.98%
2007-2027	3.00%	1.44%	2.46%	2.38%

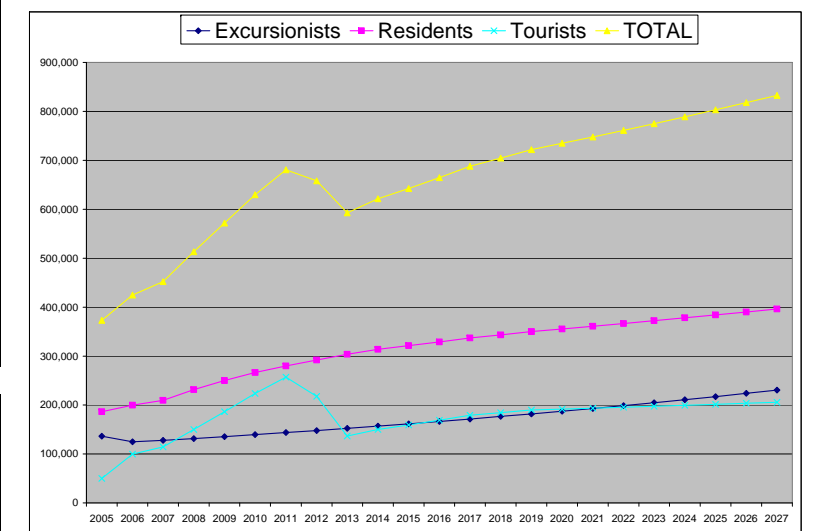


Exhibit II-32. High Case B Forecasts



**Exhibit II-33. Summary of Passenger Forecasts**

SCENARIO	PASSENGER FORECASTS			Avg p.a. growth 2007-2027
	2007	2017	2027	
Base Case A - no airport development	452,142	795,558	941,862	3.74%
Base Case B - airport development	452,142	606,271	724,409	2.38%
Low Case	443,826	640,968	750,576	2.66%
High Case A - no airport development	452,142	934,925	1,116,644	4.62%
High Case B - airport development	452,142	687,683	832,613	3.10%

**Forecast Planning Peak Hour (PPH) Passengers**

As shown in Exhibits II-9, II-10 and II-11, peak day arrivals are currently 1,363 passengers. If on this peak day, the arriving passengers were distributed evenly over each of the 13 hours in the ferry schedule period; there would be 105 arriving passengers per hour. This would mean that there would be ample vessel capacity with the existing ferry schedule to handle the current peak.

We know however that the peak will not be evenly distributed throughout the thirteen hour schedule; however no hourly data is available. We can however assume that the residents will likely have a different peak than tourists, and that residents are likely going in the opposite direction of the tourists. We can also assume that the overnight visitors (tourists) will have a peak hour based on the aircraft arrivals in St. Maarten; which may be different than the peak hour for excursionists.

An alternate method of estimating the current peak hour passengers is to build it up from the current schedule i.e., to assume that in the peak hour, there is one 135 passenger vessel and one 80 passenger vessel departing and arriving to/from St. Martin; one 80 passenger vessel departing and arriving to/from St. Maarten and four 12 passenger charters – bringing the total passenger capacity to 343; hence, the average load factor would be 31% (105 / 343). We cannot however use this daily average load factor during the peak hour – we understand that during peak times, the ferries are quite full - it is more reasonable therefore to assume a 80% load factor during this time for the larger ferries, and 50% for the small charter vessels. The total peak hour passengers would therefore be 260 in each direction, or 520 in total (arriving/departing). The estimate, although much higher than the estimate of 105 arriving passengers in the peak hour (above) is believed to be more realistic given that passenger traffic is not likely to be evenly distributed throughout the day.

Using the Base Case-A scenario there will be a total of 941,862 arriving and departing passengers in 2027, representing a total growth rate of 108% from 2007, or an average annual growth rate of 3.7%. Using the Base Case-B scenario, there will be a total of 724,409 arriving and departing passengers in 2027, representing a total growth rate of 60% from 2007, or an average annual growth rate of 2.4%.

**Exhibit II-34. Estimate of Current Peak Hour Passengers**

	CURRENT PEAK HOUR PAX				
	# Vessels	Capacity of ferry (# pax)	Max. Peak Hour Capacity	Load Factor	Peak Hour Pax (direction) <sup>(1)</sup>
Ferry to French St. Martin	1	135	135	80%	108
Ferry to French St. Martin	1	80	80	80%	64
Ferry to Dutch St. Maarten	1	80	80	80%	64
Charters	4	12	48	50%	24
			343		260

Experience shows that peak hour passengers do not grow at the same rate as total passengers, therefore for Base Case-A (no airport development), a compound annual growth rate of 2.8% results in 439 planned peak hour passengers (one-way) in 2027. For Base Case-B (airport development), a compound annual growth rate of 1.8% that results in 368 planned peak hour passengers (one-way) in 2027.

**Forecast Cargo Traffic**

The November 2002 Halcrow report recommended that the Blowing Point port should become a dedicated ferry port and that in light of the dangerous state of the cargo jetty at Blowing Point, that all cargo operations be transferred to the main port without delay. Data recorded by the Customs Department indicates that there has been no cargo tonnage landed at Blowing Point since November 2006<sup>15</sup>. Ministry Officials and Port Management have confirmed that cargo operations have been moved to Sandy Ground while the new cargo port is constructed. No cargo is therefore forecast to flow through Blowing Point.

**Exhibit II-35. Forecast Peak Hour Passengers**

	Base Case A		Base Case B	
	Per Annum Growth from 2007	Peak Hour Pax Estimates (one-way)	Per Annum Growth from 2007	Peak Hour Pax Estimates (one-way)
2008	-	260	-	260
2027	2.8%	439	1.8%	368

**Vessel Movements**

It is understood that there may be a consolidation of operators in the future that would reduce the number of smaller vessels and increase the number of larger vessels (100-135 passengers).

<sup>15</sup> Table 3.2.25 Cargo Tonnage Landed at Blowing Point by Month 2002-2007.

**Exhibit II-36. Annual Craft/Vessel Movement Forecasts**

Base Case A		Base Case B	
growth p.a from 2007	movements 2027	growth p.a from 2007	movements 2027
2.19%	47,176	1.22%	39,055

**Annual**

Craft movements do not grow at the same rate as passenger movements, as changes in load factor and vessel size can impact total passengers per movement, but not necessarily the total number of movements.

Craft movements forecasts for both Base Case-A and Base Case-B were estimated based on the average number of craft/vessels of each size in an average hour multiplied by an estimated load factor, 13 hours a day, 365 days a year, resulting in a total annual passenger load equivalent to those in the passenger forecasts.

In Base Case A, total annual movements in 2027 are expected to be 47,176 representing an average annual growth rate of 2.2% from current levels.

In Base Case B, total annual movements in 2027 are expected to be 39,055, representing an average annual growth rate of 1.2% from current.

**Peak Hour Movements**

**Exhibit II-37. Craft Movement Forecasts**

	Capacity of ferry (# pax)	Load Factor	2027					
			BASE CASE A			BASE CASE B		
			# Vessels	Max. Peak Hour Capacity (Pax)	Peak Hour Pax (at LF) - 1 direction	# Vessels	Max. Peak Hour Capacity (Pax)	Peak Hour Pax (at LF) - 1 direction
Ferry to French St. Martin	135	80%	2	270	216	2	270	216
Ferry to French St. Martin	80	80%	1	80	64	1	80	64
Ferry to Dutch St. Maarten	80	80%	2	160	128	1	80	64
Charters	12	50%	5	60	30	4	48	24
			10	570	438	8	478	368

Peak Hour Movements for scheduled traffic have been developed based on the 2027 peak hour passenger forecasts for both Base Case-A and Base Case-B i.e., the number of vessels for given passenger capacities, were multiplied by an estimated peak hour load factor to roughly equate to the peak hour passenger forecast (one direction) for a given year.

In 2027 under **Base Case-A**, it is forecast that three 135 passenger ferries and one 80 passenger ferry will be required to the French side of St. Martin, two 80 passenger ferries to the Dutch side of St. Maarten, and five 12 passenger charters will be required in the peak hour.



In 2027 under **Base Case-B** it is forecast that two 135 passenger ferries and one 80 passenger ferry will be required to the French side of St. Martin, one 80 passenger ferry to the Dutch side of St. Maarten, and four 12 passenger charters will be required in the peak hour.

## G. Development Programme

The development programme defined by the Programme Definition Document (PDD) has been developed from the traffic forecasts analysis for vessels and passengers and the results of the Goals (Strengths, Weaknesses, Opportunities and Threats) Workshop as an important step in the development of the Master Plan for the Blowing Point Port. The PDD provides:

- An overview of the Terminal and other Landside facilities and operational requirements to accommodate the 2027 forecast traffic;
- Specific goals for the design of the facilities; and
- A detailed functional programme that is then use in developing design concepts.

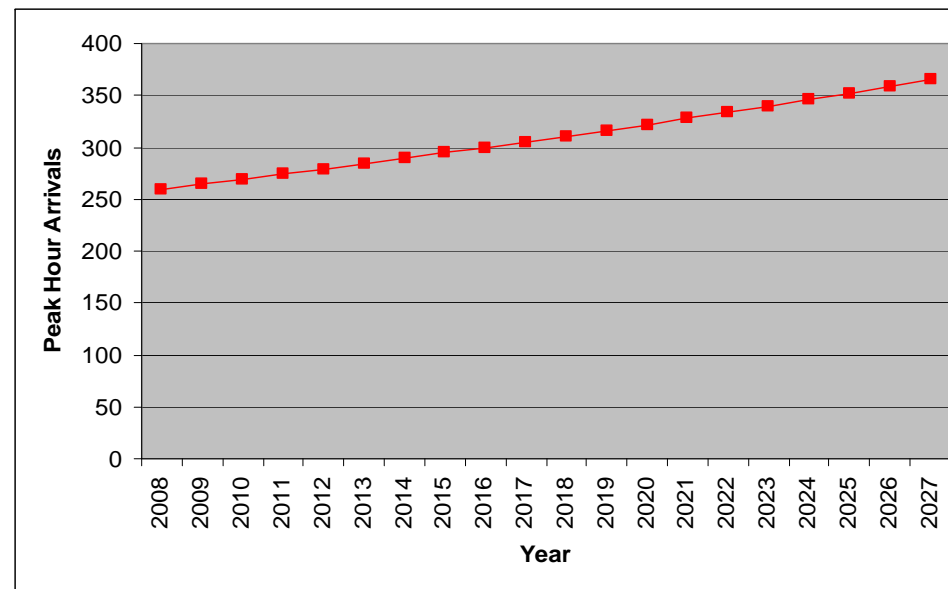
It is anticipated that tourism will continue to grow strongly and that passenger traffic at Blowing Point increase from 390,000 arrivals/departures in 2006 to approximately 724,409 in 2027 under the scenario where the airport runway is expanded to accommodate a B737 aircraft flight to Miami. This scenario has been selected for sizing a new Port Terminal as it will provide capacity to 2027 if the airport is expanded and to approximately 2022 if there is no airport expansion. Provided that the Ferry Terminal has the ability to be expanded in the future, this approach will mean that the investment is prudent.

Typically, as passenger transportation traffic increases, the overall annual traffic increases faster than the peak hour traffic. For developing passenger terminal facilities, planners use the concept of the **planning peak hour**. The planning peak hour is not the worst hour in the forecast year, but rather an approximation of the 90% peak hour. For facilities where time of day data is not readily available, planners attempt to select the peak hour of the average week day within the peak season.

Exhibit II-38 summarizes the selected planning peak hours for 2008 and 2027. The planning peak hour increases at a compound growth rate of 1.8% per year, which is less than the 2.8% annual growth rate in passenger traffic. Exhibit II-39 illustrates the forecast growth in one-way planning peak hour traffic.

**Exhibit II-38. Planning Peak Traffic Forecasts 2008 and 2027**

2008 Peak Hour	Vessel Size			
	135	80	12	
Seats	135	80	12	
Number of Vessels	1	2	4	
Total Seats	135	160	48	343
Load Factor	80%	80%	50%	
<b>One Way Passengers</b>	<b>108</b>	<b>128</b>	<b>24</b>	<b>260</b>
2027 Peak Hour	135	80	12	
Seats	135	80	12	
Number of Vessels	2	2	4	
Total Seats	270	160	48	478
Load Factor	80%	80%	50%	
<b>One Way Passengers</b>	<b>216</b>	<b>128</b>	<b>24</b>	<b>368</b>



**Exhibit II-39. Forecast Growth in the One Way Planning Peak Hour**

### 1. Goals Workshop (SWOT)

Within Phase 1B of the study tasks, it had been agreed with the Ministry that a strategic planning workshop (Goals-SWOT) would take place with various Ministry Officials and Port Board members as well as stakeholders at large concerned with the operations and commercial development of the Blowing Point Port.

The main purpose of the strategic workshop was to obtain direction as to the goals, strengths, weaknesses, opportunities and threats related to the commercial operations and physical development of the Blowing Point Port.

On the 9<sup>th</sup> October 2007, a Goals/SWOT workshop took place with Ministry Officials and members of the Port Board and subsequently on the 10<sup>th</sup> October 2007, the workshop was repeated as a general consultation process with Government Ministers/Officials, Port Board members and stakeholders at large being present. To stimulate participation Jacobs representatives provided a presentation as to what was considered to be the Port's levels of service, commercial goals and development programme requirements. Jacobs reported the results of the two workshops in its letter report to the Ministry dated the 22<sup>nd</sup> October 2007.

A consolidation of the issues and requirements raised during the two workshops are presented as follows:

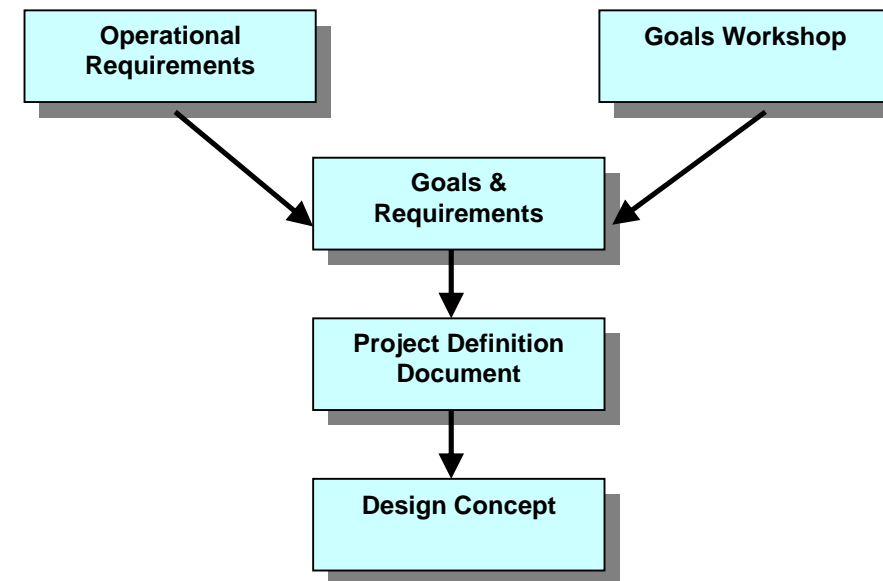
1. The current Immigration system is slow to operate as arriving passenger details are entered manually. It was suggested that a system of readable passports and scanning of documents would improve efficiency. Further it was noted that a two line system separating tourist from residents/nationals would improve processing efficiency.
2. It was agreed that 90% of the passengers and baggage should be processed (from the time of debarkation to the landside kerb) within 15 minutes. The possibility of pre-clearing Immigration in St-Martin was raised though GOA Officials stated that St-Martin Officials were not amenable to the service.
3. Generally it was acknowledged that the current method of unloading bags and cargo when debarking passengers from the vessels is unsafe and inefficient. It was suggested that Ferry operators unload the bags separately from that of passengers, and that bags be transported by a Dock-Baggage Handler (could be Ferry Operators or Port Management) to the Terminal. Many queried why the handling of bags could not be handled similar to what is usually found at Airports.
4. Preference was expressed for a consolidation of Vessel Operators so that larger vessels (80-135 passengers) are used for the regular schedule and that the quality of vessels be improved. Further it was felt that the GOA should regulate the way in which Ferry Operations provide their service and the quality of the vessels used.
5. Well wishers and greeters are not generally present at the Port, although at certain times of the year returning Nationals are greeted by family and friends.
6. Although the Port has no past experience as to the success of duty free shops, it was acknowledged that the new Terminal plan for duty free shops should be modest. Inbound duty free is allowed for residents/nationals provided that they have been out of country for 72 hours.



7. The Terminal design should include canopy structures for the new jetties, which could also provide a safety barrier some 2 feet away from the jetty edge. Further sufficient landside space is required for the proper functioning of taxis, tour buses and public drop-off activities.
8. The Terminal design parameters should include handicap ramps and elevators where changes in building-operating levels are required. For example a multi-storey building is to include an elevator. Also a lunch room for staff working at the Port was identified as a requirement.
9. The Terminal design should include the Port Health service with the appropriate areas for the proper quarantine of plants and animals. Further the requirement for a Diplomatic lounge was highlighted by Government Officials.
10. The Land-Use Plan and its development should include the requirement for a combined service building, if not available within the Terminal, which would house search-rescue, disaster management, fire-fighting and police services.
11. It was stated that although cruise ships with 600 passengers are handled at Blowing Point one a month, passengers are pre-screened for security and Immigration is conducted aboard the ship, and subsequently, processed at the Port jetty while circumventing the Terminal.
12. A control tower within 180 degree visibility towards to the water front is to be included as part of the new Terminal design. The tower would be manned by 2 persons requiring about 250 square feet.
13. A landside restaurant available to passengers and the public at large is to be designed within the new Terminal design whereas a modest seaside food outlet could also be made available to passengers for last minute purchases by passengers. Further on-site general shopping for the community as well as other commercial services were confirmed as requirements for the Port development.
14. An appropriate waste & wastewater system should be included as an integral part of the Terminal design and that its design should include the re-issue of wastewater.
15. Generally it was felt that sufficient land should be purchased to ensure a stable long-term development of the Blowing Point Port and to encourage private sector involvement in the development of various direct and indirect Port related services.
16. Ministry Officials confirmed that all drawings and related documents reference metric units.

## 2. Statement of Operational Requirements

The operational requirements are a function of the forecast demand and the objectives for the facility as drawn from stakeholder interviews and the goals workshop that were held in October 2007.



### Terminal Requirements

The terminal will be developed, staffed and managed to:

- Provide a comfortable Level of Service C (Level of Service C as used in terminals is a level that provides sufficient space and a rate of processing that passengers feel comfortable) at 1 million arriving/departing passengers per year;
- Provide a comfortable level of service for 368 arriving international passengers in the arrival planning peak hour;
- Provide a comfortable level of service for 368 departing international passengers in the departure planning peak hour;
- Reflect the needs of the primary stakeholders – ferry operators, the tourism industry and Anguillan government agencies;
- Provide a simple and efficient layout;
- Incorporate common use facilities throughout;
- Be operationally cost efficient for ferry operators and users;
- Provide maximum flexibility to deal with possible changes in traffic mix or growth;
- Meet current and forecast security requirements;

- Have a building exterior consistent with the architectural context of the Caribbean and that respects the history and aspirations of Anguilla;
- Provide a pleasant memorable experience, with a high level of service; consistent with the needs of international travellers and with maximum use of natural light;
- Provide a low stress environment for passengers;
- Provide for covered connection to taxis and a drop-off, roadside curb pick-up area and to ferries;
- Maximize visibility and location of concessions to optimize concession revenue;
- Provide for efficient servicing of concessions;
- Provide rapid convenient access to car rentals and returns;
- Auxiliary power unit will have sufficient capacity to handle 100% of the requirements for the terminal, piers and auxiliary buildings given a maximum downtime of 15 seconds during failure. Equipment could be located within the Combined Service Building; and
- Maximize the use of energy efficient technologies and environmentally friendly products, including if feasible, maximum use of solar power to reduce the use of fossil fuels.

### Landside Requirements

The landside shall be developed, staffed and managed to:

- Provide 650 passenger parking spaces, 15 employee parking spaces, queue space for 10 taxis and 30 rental car ready stalls;
- Provide sufficient terminal building arrivals and departure curb length and storage for taxis drop-off and pick-up and for a public drop-off/pick-up area on a single level curb;
- Cover the landside terminal walkway and roadside curb;
- Provide adequate land for commercial developments along the access road in walking distance from the terminal;
- Provide for a road system to serve commercial lands and allow for deliveries to the terminal; and
- Provide landscaping that reflects the character of Anguilla and the Caribbean.

### Combined Service Building

The combined services building provides a centralized, cost effective location for services supporting the Port terminal and its ferry operations, including building maintenance, search and rescue, police and other similar services. Maintenance requirements should include the following functions:



- Workshops;
- Maintenance equipment storage;
- Stores depot; and
- Possibly auxiliary-emergency electric power units.

#### **Water Supply**

The water supply will be sufficient to handle forecast demands in 2027. The potable water system should be designed to provide for the following demands:

- Peak Hour - 15,000 litres
- Peak Day - 50,000 litres
- Annual Consumption - 30,000,000 litres

#### **Sewage System**

The sewage system should be designed to provide secondary treatment of 150,000 litre per day.

#### **Environmental Objectives**

The terminal and combined services building will be designed to:

- Minimize the environmental impact on surrounding communities;
- Promote efficient energy usage and minimize the use of fossil fuels for energy production;
- Promote recycling of waste;
- Promote the use of native vegetation in landscaping; and
- Protect the sea from potential pollution.

#### **Financial Objectives**

The facilities will be designed to:

- Be cost effective and maximize commercial revenues, including concessions, car parking and land leases. An upper level restaurant, accessible to the public and with an enclosed ocean view should be included in the development;
- Minimize staffing and maintenance costs through design of low maintenance facilities; and
- Minimize the cost of subsequent expansion programmes.

### **3. The Terminal Programme**

The Terminal Programme is a statement of requirements for the floor areas and numbers of processors required to meet the planning peak hour demands. It is developed using Jacobs



Terminal Industry Standard Model that draws on the International Transport Associations guidelines for terminal planning.

Based on interviews with stakeholders and the two workshops held in October 2007, the following assumptions were incorporated into the modelling exercise:

- The largest vessel size will in future years remain at approximately 135 passengers;
- Automation to Customs, Immigration and ticket sales will allow increased throughput rates in the new terminal;
- 90% of arriving passengers will be processed through the terminal within 15 minutes of vessel arrival (including Immigration, baggage recovery and Customs);
- Baggage will be delivered to the baggage hall within five minutes from vessel arrival;
- Office space and quarantine facilities will be required for Agriculture and for Port Health services;
- Seating will be provided in the secure area for 80% of the largest vessel seating capacity (seats for 108 passengers). Landside (non-secure seating will be limited to 10 seats in the departure area and 20 seats in the arrivals area);
- The Immigration processing rate – 1 minute per passenger per unit for visitors, 30 seconds for Anguillans;
- Customs processing rate will be sufficient to clear 90% of passengers within 15 minutes of vessel arrival;
- Security processing rate is 180 passengers per hour;
- The well-wisher and greeter ratio is low. Tourists typically don't have greeters (although many of the high end hotels will have people there to meet their guests) and Anguillans are most often on day trips. A ratio of 0.2 well wishers per passenger is used;
- There will be an average of three bags per passenger. Anguillans will typically have more, and visitors less;
- The average dwell time in terminal will be 15 minutes;
- Duty Free sales will be limited. Tourists will be returning through St. Martin, a major duty free centre, and most Anguillans will not be eligible for duty free because they are day-trippers;
- Operations will need to continue during construction; and
- The high risk of hurricane water damaging the new Terminal guides the suggestion to have all sophisticated functions on an upper level away from the high waves.

With these assumptions, the Terminal Programme summarized in Exhibit II-40 was developed.



The terminal will be developed as a two level concept with approximately 2,350 m<sup>2</sup> of total space.

### **4. Development Issues**

We offer the following preliminary list of issues.

- The currently available land, owned by the Government of Anguilla, is insufficient for the current and long term development requirements to the year 2027;
- The existing Terminal is inadequate in size and quality to meet today's requirements;
- Parking provision is insufficient. Ad-hoc parking facilities have resulted on neighbouring privately owned lands;
- The current septic system for the processing of wastewater is inadequate for the current and long term development of the Port facilities;
- Potable water is available but in limited supply;
- The image of the Port from the sea is modest with little sense of place;
- The image of the Port from the landside is poor, disorderly and crowded;
- The appearance and size of the current facility is not supportive of Government's strategy to attract the high-end tourist;
- The current draft island wide National Land Use Plan has not been legislated by Government, and therefore limits proper control for the development of the Blowing Point as an economic hub; and
- The financial feasibility and financing of the Port development remains somewhat unknown until such time as Government establishes a Port Authority. Such an Authority would set charges and rates that allow it to generate sufficient revenues to support Port operations and its long term physical development and continued recapitalisation.

## Exhibit II-40. Terminal Programme

Terminal Element	International	
	Metric	English
<b>Processors</b>		
Curb Length – departures (linear metre)	45	150
Check-ins – Number of Units	3	1
Emigration - Number of Units	1	1
Security Points - Number of Units	2	2
Hold Room Seating – Seats	86	86
Bag Make up – Load Points	2	2
Immigration Units – 15 min max wait	6	6
Immigration Units – 20 min max wait	4	4
Bag Claim Units – Number	1	1
Bag Claim Display Length (S.M./sq.ft.)	48	157
<b>Spaces</b>	<b>S.M.</b>	<b>Sq.ft.</b>
Departures Concourse Area	87	940
Check-in Counter Space	17	183
Police Check Space	0	0
Emigration Space	90	969
Hold Room Space	228	2,455
Concessions – Food & Beverage	135	1,455
Concessions – Retail	54	582
Concessions – Duty Free	65	698
Concessions – Services	0	0
Concessions – Total	254	2,735
Car Rentals / Tour Operators	372	4,000
Bag make up area	65	700
International Arrivals Hall	296	3,183
Inspection Services Support/Offices	74	800
Inbound Bag Ops Area	19	200
Bag Claim	462	4,973
Customs/Imm. Secondary Area	50	538
Arrivals Lobby Landside	27	290
Ferry Operator Space	52	558
Other Govt. Agencies	46	500
Lounges/VIP	74	800
Sub Total	2,235	24,061
Management	25	250
Elec/Mech/Shops/Comm	0	0
Circulation/Restrooms	93	1,000
<b>Total Nominal Area</b>	<b>2,353</b>	<b>25,311</b>



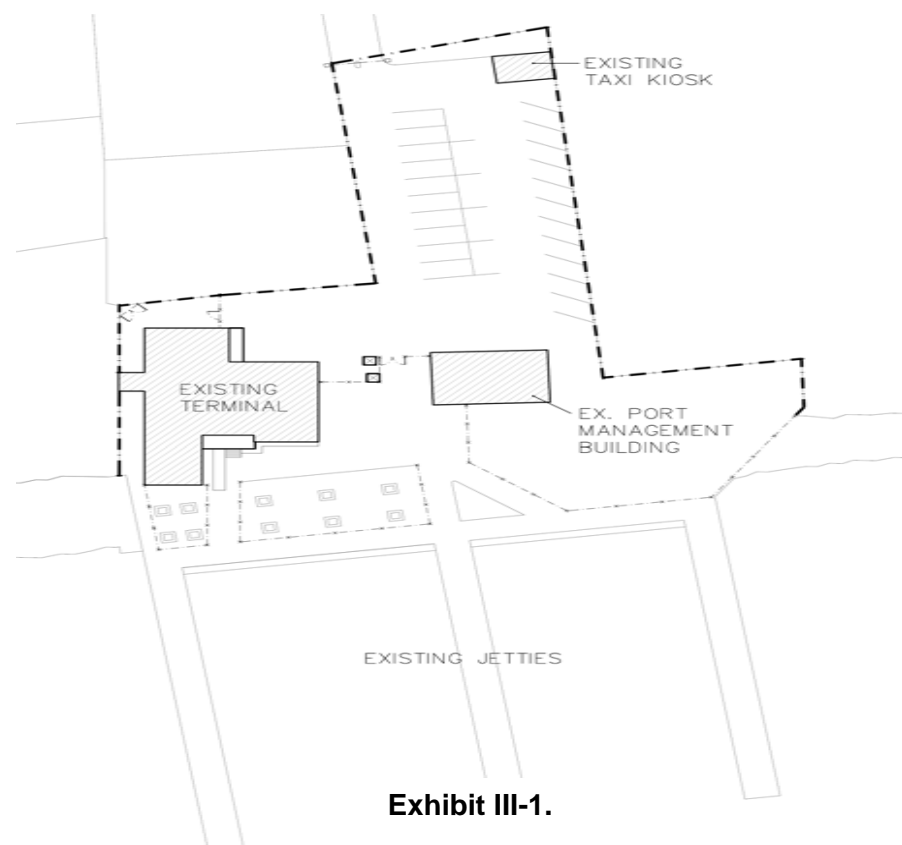
# III. TERMINAL DEVELOPMENT OPTIONS

## A. Introduction

The Terminal design options were developed to meet the requirements of the Terminal Development Programme outlined in section II-G. The requirement is for a 2353 square meter Terminal that would house: Port Management, Immigration, Customs, security, port health, ticket sales, baggage handling system and restaurant and concessions.

A critical element of the design is the Government’s commitment to a passenger processing level of service, which has a direct impact on each and every aspect of Port operations: **“90% of arriving passengers will be processed through the terminal within 15 minutes of vessel arrival including Immigration, baggage recovery and Customs”**

Below is Exhibit III-1 showing the limits of the existing property and the location of buildings, parking facility and jetties.



## B. Terminal Design Options

From the accepted Development Programme, the Architect developed two Terminal design concepts that meet the overall operational and functional requirements established by the 20 year forecasts of passenger activity and the outcome of the GOA/Port Board workshops.

Most importantly, options were such that the building could be constructed within the boundaries of existing Port land. Option 1 is shown in Exhibit II-2 to demonstrate that the new Terminal can be constructed without the purchase of additional land. The same holds true for option 2.

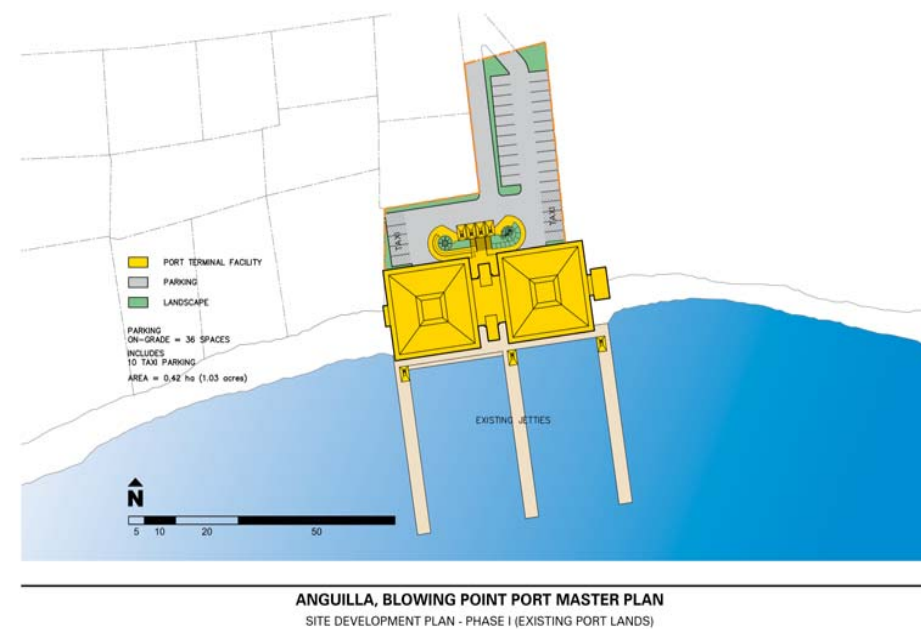


Exhibit III-2

The common features and design intentions reflected in both options are to:

- Facilities are sized to satisfy the operational and functional requirements established by the 20-year Development Programme and the outcome of the GOA and Port Board Workshops;
- Designed to enhance the arriving and departing experience of passengers through a spacious, modern and attractive facility;

- Provide a focal point for the future commercial development of Blowing Point community;
- Acknowledge the possibility of high storm surge experienced during hurricane season by raising the building above the jetty level;
- Adopt architectural styles in the designs that relate to Anguilla and the Caribbean;
- Use Environmentally friendly and energy saving systems;
- Relate to the three recently completed jetties; and
- Create a clean, organised and beautiful building that is more supportive of high-end tourist.

Option 1, as illustrated by Exhibits III-3, 4, 5 and 6, is a linear design with the longest part of the Terminal facing the three jetties whereas Option 2, as illustrated by Exhibits III-7, 8 and 9 is an L-shape design with the departures check-in and main hall facing the jetties and the arrivals hall extending towards the existing parking area.

### 1. Option 1 Terminal Building Design

The design makes the most of the restricted site by pushing the terminal building as close to the edge of the jetties as possible. It accounts to the potential sea surges during hurricanes by raising the main components of the facility to one level above the jetties. This strategy further helps in separating arriving and departing passengers.

#### The Departures Process

Two locations for passenger drop off are provided one at the Ground Floor Level, protected from the weather by the overhang of the building above whereas the other at an intermediate level between the Ground Floor and the Second Floor. A series of fabric canopies provide some shade at the intermediate passenger drop off level. Passengers at either level can take the stairs or a ramp in the front of the Terminal. Elevators are provided from the Ground Floor Level as well. The drop off area will have lush landscaping and fountains to further accentuate the speciality of this place.



On level 2, the passengers are allowed to check-in large bags at the ticket counters. These bags will be put onto conveyors that bring the bags down to the jetty level, to be loaded onto baggage carts and transported to the departing ferry. Alongside the ticket counters are the departures tax and Emigration functions. Space for two security counters with x-ray scanners is provided. At this point passengers will only have carry-on baggage as large bags should be check-in while purchasing a ticket.

The departures holdroom is a large double height space with full height windows that offer great views towards St. Martin. The fact that the holdroom is one level up further emphasizes the grand panorama. The departures holdroom accommodates a large number of seats and additional space for duty free shopping and food-beverage kiosks.

In the central core of the terminal building are located washroom facilities, both for departing and for arriving passengers.

On the third floor level above the Departures holdroom is space for a landside restaurant and Diplomatic Lounge as identified during the Goals Workshops. These areas are accessible by stairs and elevator.

Upon the announcement for boarding, departing passengers proceed via elevator, stairs or a ramp down to the jetty level and walk onto the departing vessel.

#### ***The Arrivals Process***

Passengers debarking from the arriving ferry have the option of going up a ramp or stairs or an elevator to the second floor. The queuing area for Immigration is within the double height space with large floor to ceiling windows that offer great views. On clearing Immigration, passengers can collect their checked-in baggage before proceeding through Customs. Inbound baggage will have sufficient space for installing an x-ray scanner should this be a Port requirement.

Space will be allocated for Inbound duty free, as identified during the Goals Workshop for returning Nationals who have been out of the country in excess of 72 hours. Secondary offices for Customs and Immigration are located alongside each other. A cashier's counter is provided for the collection of customs duties.

Passengers can then proceed to the taxi and passenger pick-up area on the Intermediate level or the Ground Floor Level.

The approximate area of the Option 1 design is about 2,610-sq.m. [28,000 square feet]. Individual spaces are in slight excess of the minimum processor and space requirements developed by the forecast.

#### ***Harbourmaster's Tower***

In the middle of the Terminal building on the Seaside is a small tower cab for the harbourmaster. The cab is accessible from the third level up a ship's ladder. It is set high enough to offer 180-degree view of the harbour and the vessels using Blowing Point.

#### ***Future Expansion [Exhibit IV-5]***

This design offers a logical expansion of the facility when the need arises in a linear fashion to the east and the west of the terminal.

#### ***Parking***

Within existing Port land (Phase I), we can accommodate 36 parking spaces, including 10 spaces for taxis. The entrance road loop allows for buses to navigate to the drop off area. The remainder of the parking requirements will need to be provided off-site.

## **2. Option 2 Terminal Building Design**

This option maximises the limited site by pushing the terminal building as close to the edge of the jetties as possible. It accounts to the sea surges due to hurricanes by raising the main components of the facility half a level up above the jetty level.

#### ***The Departures Process***

Passengers drop off at the entrance of the terminal, embellished with luxuriant plants and fountains. On the left of the entrance are the ticket and departures tax counters. Emigration and Security verification areas are next in process. Offices for Security and Emigration are located alongside each other.

The large Departures Holdroom is again located to take advantage of the beautiful seaward views. All bags are taken through the Security verification area and the large bags may be dropped-off on a conveyor belt at the check-in counters for the ferry operators to handle.

Over 100 seats are provided in the Holdroom. Space for small duty free outlets and food-beverage kiosks are also available. Washroom facilities are centrally located.

A large Restaurant Facility and a Diplomatic Lounge are located above the Departures Holdroom on the Second Floor.

When called for boarding, passengers proceed down a ramp to the jetty level and on to the departing ferry.

#### ***The Arriving Process***

Arriving passengers will proceed up a similar ramp to the Immigration Hall. Three double counters allow for sufficient space for over the 20-year passenger forecasts. Large baggage can be collected from a conveyor and passengers would then proceed through Customs. Secondary Immigration and Customs offices are located in a central area. There is additional space for Port Health and related requirements. A cashier for collecting customs duties will be located before passengers leave the terminal to a taxi and passenger pick-up kerb line.

Additional port offices are provided on the Second Floor Level above the Secondary Immigration and Customs.

The approximate area of the Option 2 design is 2,330-sq.m. [25,000 sq. ft.] nearer to what has been determined to be the requirements and less than Option 1.

#### ***Harbourmaster's Tower***

In a similar central location than in Option 1, the harbourmaster tower has a 180-degree view of the harbour.

#### ***Future Expansion***

In future the port facility can expand towards the west for the Arrivals Process and to the North and east for the Departures Process.

#### ***Parking***

This option accommodates 28 parking spaces with the site. The driveway is designed to allow busses turning.

## **3. Other Considerations**

#### ***Fast-tracking***

Both Options 1 and 2 have the facility at ground level for fast tracking large groups of tourists and cruise ship day-trippers, bypassing the Upper Level arrivals processing area. Immigration and Customs checks can be handled on the Ground Level and passengers allowed through the gates to the pick-up kerbside.

#### ***Environmental And Energy Considerations***

A membrane based water reclamation systems is being proposed for reclaiming non-potable water from sewage for the flushing of toilets and the irrigation of landscaped areas. This is a positive





solution for addressing water shortage issues on the island. Preliminary studies identify an approximate size for a Wastewater Reclamation Plant that is located on the eastside of the terminal. Further investigations are necessary to determine a size of building and the appropriate location for it and this will be carried out during the detailed design stage.

**Solar Panels:** Solar energy for heating water for the lavatories is a long-term efficient and cost effective solution. The panels are roof top mounted with storage tanks located within the building.

Additional energy saving systems will be part of the detailed design of the Electrical and Mechanical systems.

### **Barrier Free Design**

The entire facility will be design to the Canadian Standards Association [CSA] Barrier Free Design guidelines. This document sets the standards for parking, washroom facilities, elevators, ramps, exits, doors, etc. for persons with disabilities, similar to the American Disabilities Act [ADA]

## **C. Evaluation & Recommended Design Option**

The Terminal building designs submitted for consideration at Blowing Point satisfy the programme requirements. They are the result of reviewing many possible approaches.

Paramount in the development of alternatives was a concern for effective use of a very small site and a desire to develop a design that could be developed immediately, and in parallel with the acquisition of additional land. Hence, designs that make the most effective use of the available land in the immediate and long term are preferable.

Option 1 elevates the majority of the floor area above existing grade such that the space underneath remains usable. A simple examination of the number of vehicles that can be accommodated on the existing site shows that option 1 is marginally more efficient than option 2.

If we consider only the existing site it is also apparent that movement from the parking side to the waterfront is considerably easier in option 1 than in 2.

A point that might not be as readily apparent is that in considering potential future expansion certain "in ground" facilities are easier to handle in option 1. For example, the wastewater treatment and recycling plant presents a greater challenge in

option 2. The first level of Option 1 will simply span over top of the plant with minimum operational impact. Certainly, means to accomplish the same results are available for option 2; however not without greater complexity and additional cost.

In consideration of the potential effects of a surge wave resulting from some hurricanes, option 1 is preferable in that most of the floor area is above expected wave levels whereas option 2 is clearly more susceptible.

Option 2 physically constrains the area along the waters edge and while it will allow the proper movement of passenger and bags, it does not have the as much space that elevating option 1 affords.

Option 2 requires less vertical movement for arriving and departing passengers. Passengers can move to and from the ferry more quickly. One should note however that in processing passengers "quicker" in one area is not always an advantage. Designed properly, the movement of people from vessels to immigration and on to bag claim and customs will be a balanced process in terms of time. Processing is a linear function and a good design manages and organizes the flow of passengers in both directions to avoid bottlenecks.

Option 2 although similar in floor area to option 1 will likely be slightly less expensive. There is in terms of raw area less finished surface to build. The area under option 2 is unfinished "crawl" space whereas in option 1 the area is "outdoors"; the space under the main building is finished usable space, and provides greater flexibility for immigration-customs to process, under critical situation, a greater number of passengers at ground level.

Elevating option 1 above the current existing building will provide support to operations during construction of the new Terminal. Option 2 is arranged in a manner that does not require the existing terminal building to be demolished until most of the new building is built. However, both approaches, to some extent, undoubtedly impact operations in some form. Services are disturbed, dust is created, and construction barriers are erected. We are confident that either solution can be built or in this comparison neither alternative is significantly better than the other during the construction period.

Usable space is an important criterion in determining which alternative is preferable. Usable space needs to consider future expansions as well. In this regard it should be readily apparent that option 1 is more successful than option 2.

Imagining long-term development makes good design decisions. In both options it is expected that long-term expansion of the piers will likely occur in a westerly direction. It may well take the form of an additional pier. At some point in the future it may be reasonable to assume that the ferries in use may be larger and

somewhat more sophisticated, thereby, impact Pier design and their operations.

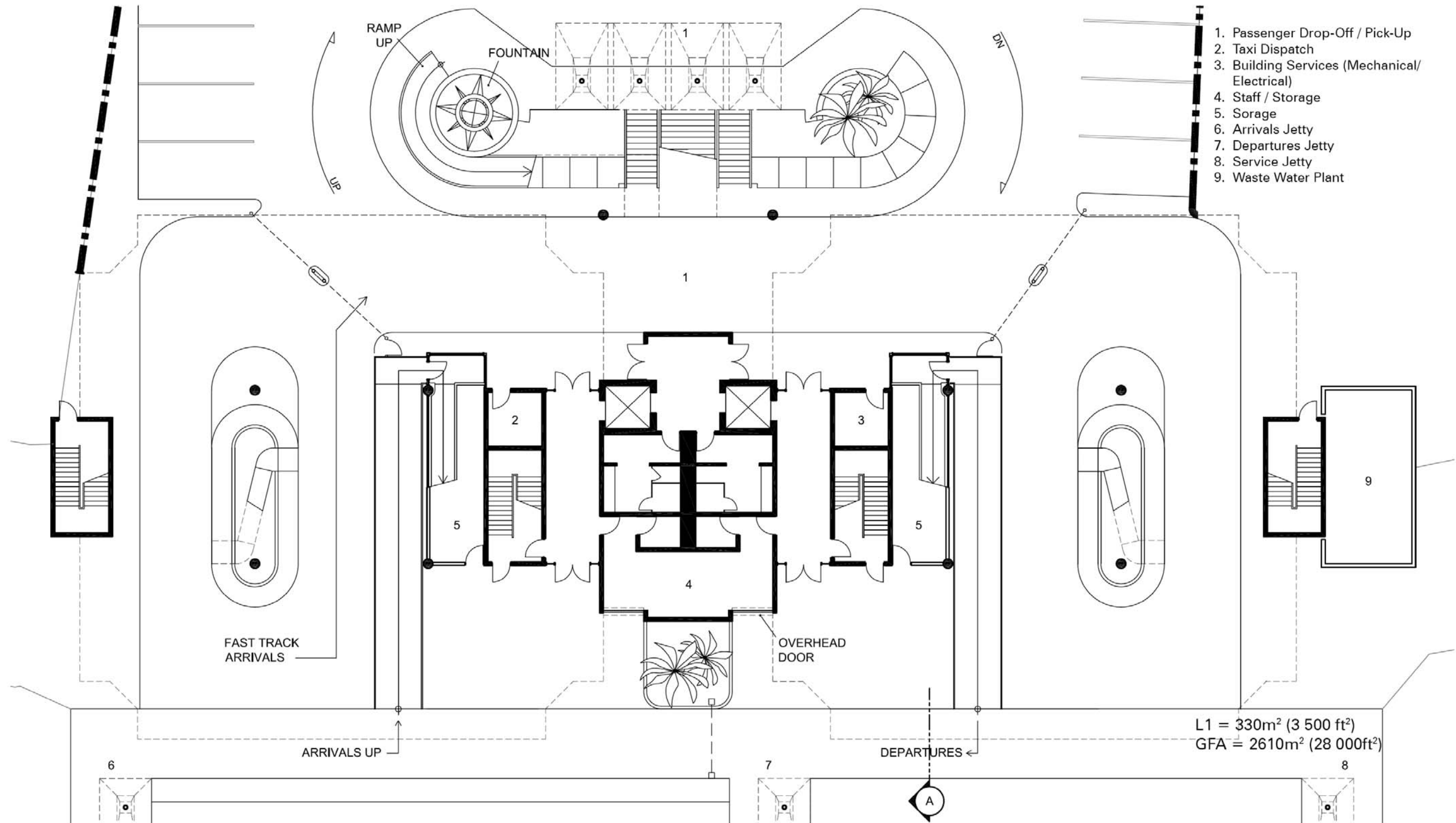
The elevated nature of option 1 lends itself more easily to the long-term development of an enclosed "bridged" connection to a larger vessel. A mechanical arm making connection to the ferry at a level above the current pier floor level is a common design approach, which is best satisfied by option 1.

On the 27<sup>th</sup> November 2007, Jacobs and Queen's Quay Architects representatives met with Government Officials and Port Board members to review key elements reported within the project's Inception Report and to present two design options for the development of the Blowing Point Terminal and Landside facilities. During an open discussion of the design options, those present favoured option 1 "Linear Design" of the Terminal as opposed to the L-shape building.

Renderings of the preferred option are illustrated by Exhibits III-10, 11, 12, 13, 14, and 15.

Based on the selected Terminal design option, the Team proceeded to further refine the design of the Landside structures and the Land Use Plan for the Port environs.





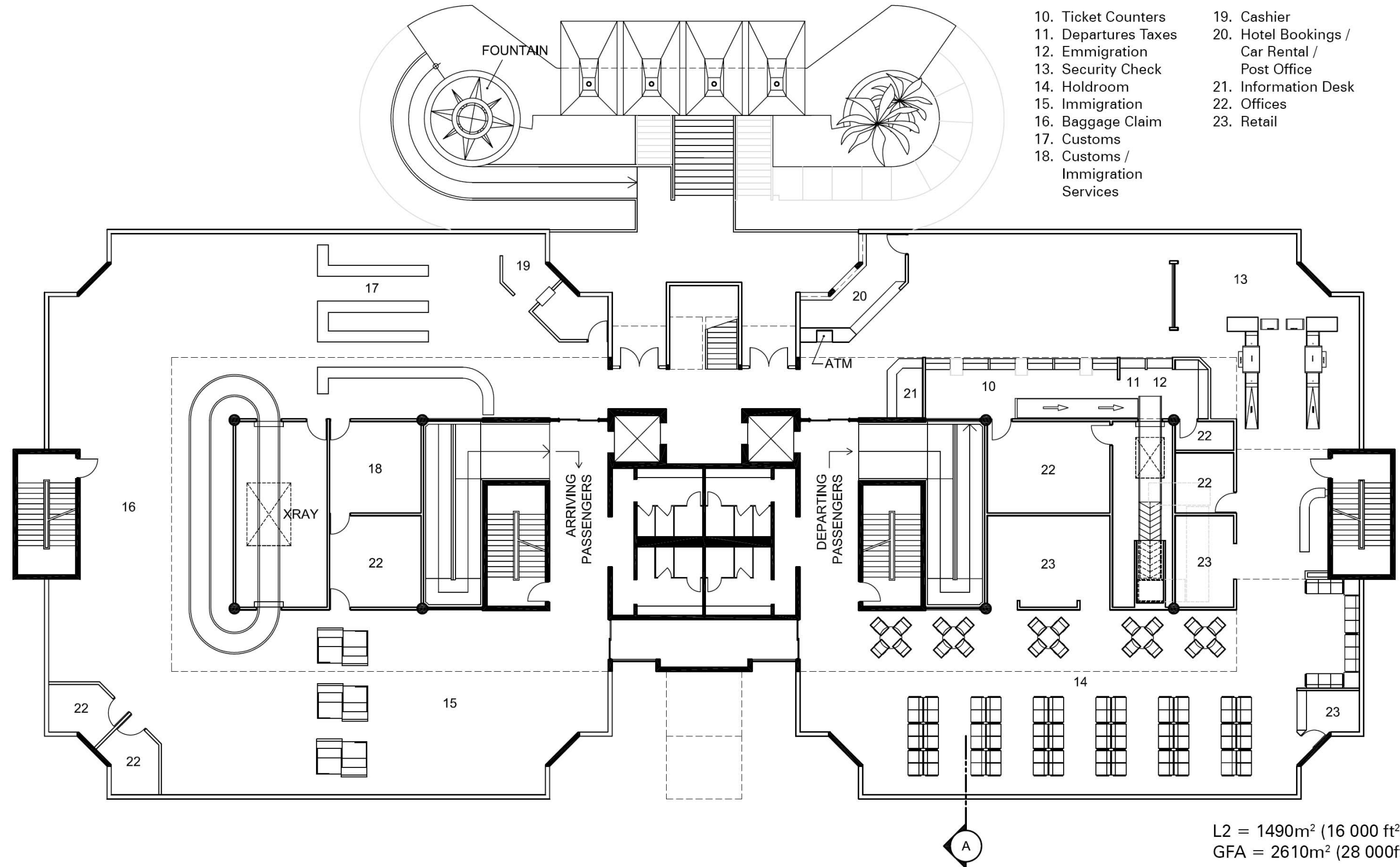
Government of Anguilla

### ANGUILLA, BLOWING POINT PORT MASTER PLAN

OPTION 1 - GROUND FLOOR PLAN 1:200

Exhibit III-3.





Government of Anguilla

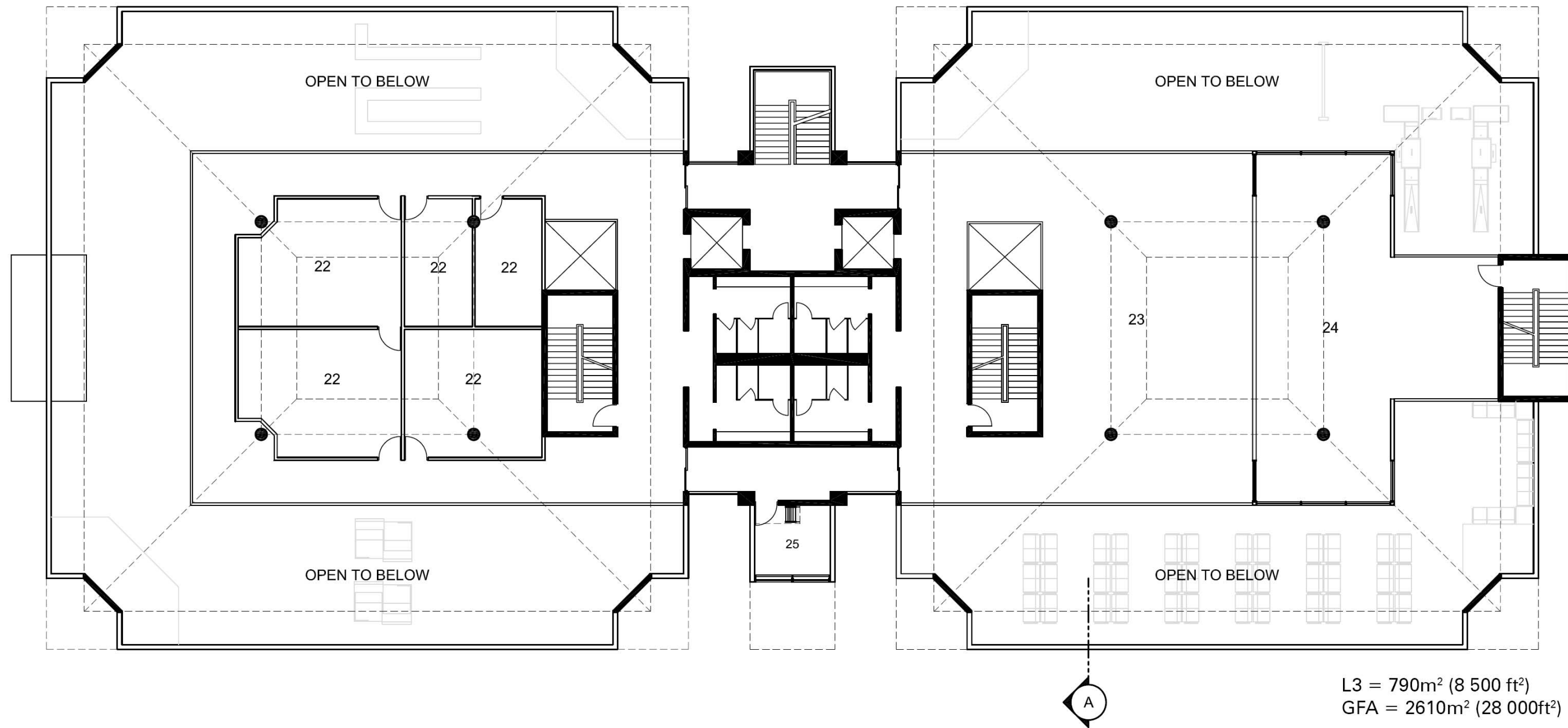
### ANGUILLA, BLOWING POINT PORT MASTER PLAN

OPTION 1 - SECOND FLOOR PLAN 1:200

Exhibit III-4.



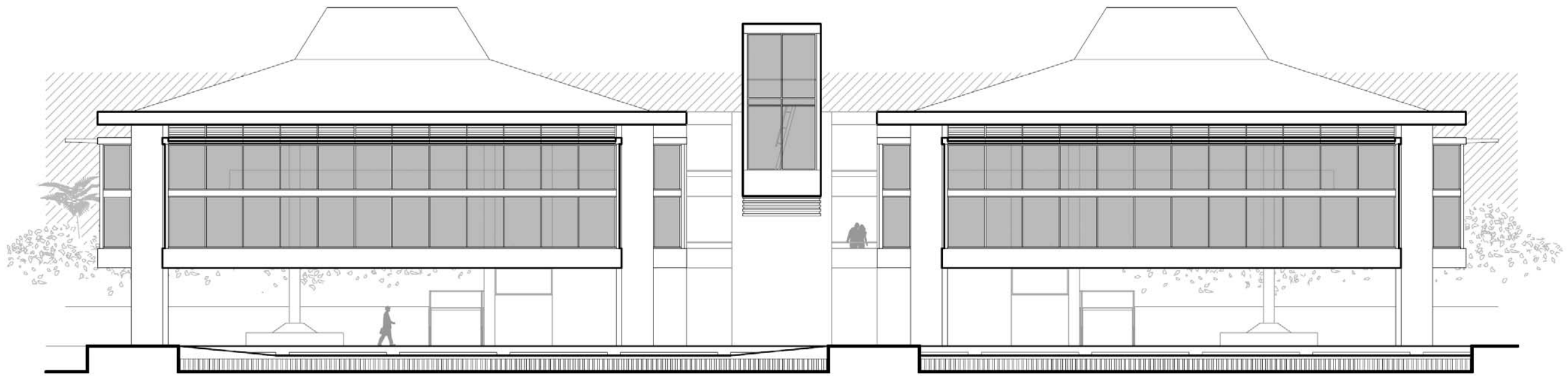
- 22. Offices
- 23. Restaurant / Retail
- 24. Diplomatic Lounge
- 25. Harbourmaster Tower



Government of Anguilla

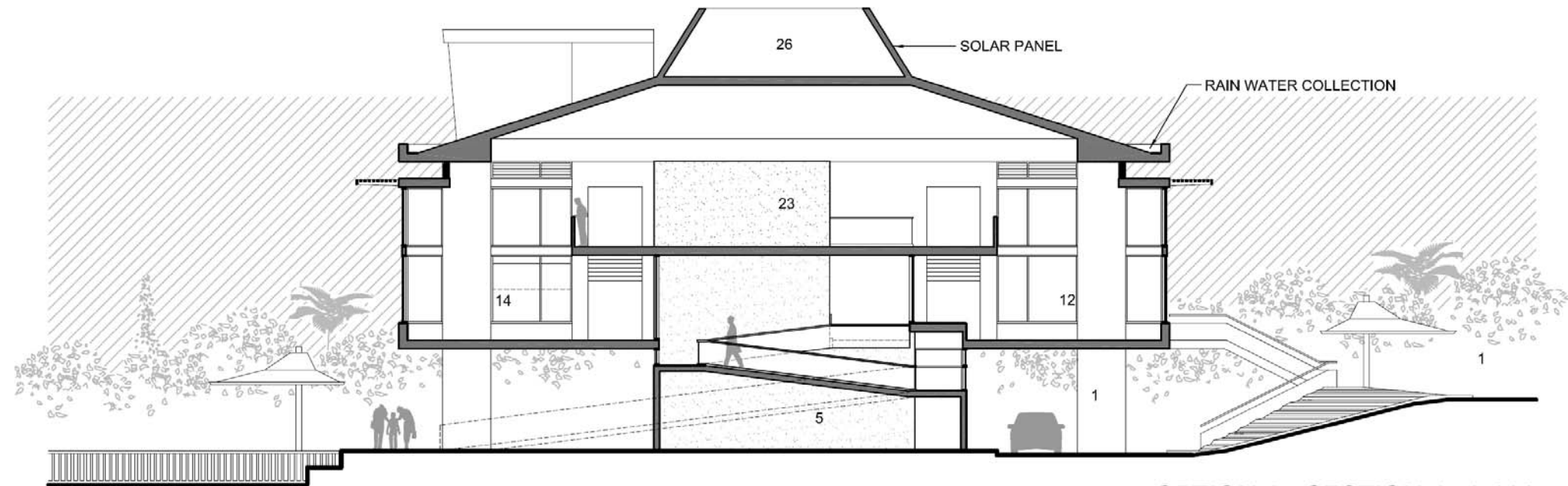
**ANGUILLA, BLOWING POINT PORT MASTER PLAN**  
 OPTION 1 - THIRD FLOOR PLAN 1:200  
 Exhibit III-5.





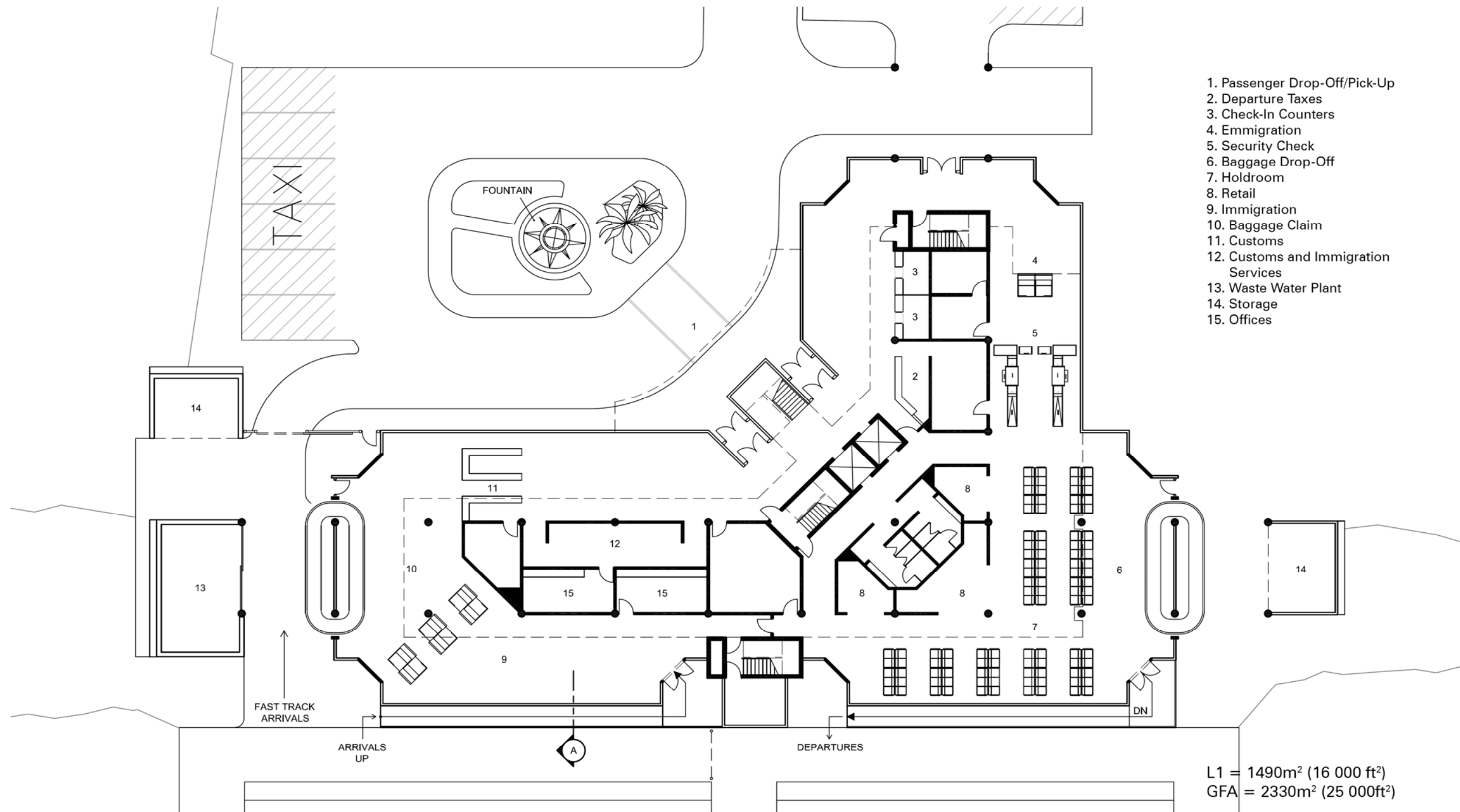
OPTION 1 - OCEANFRONT ELEVATION 1:200

- 1. Passenger Drop-Off / Pick-Up
- 5. Storage
- 12. Departures
- 14. Holdroom
- 23. Resaurant
- 26. Mechanical Storage



OPTION 1 - SECTION A 1:200

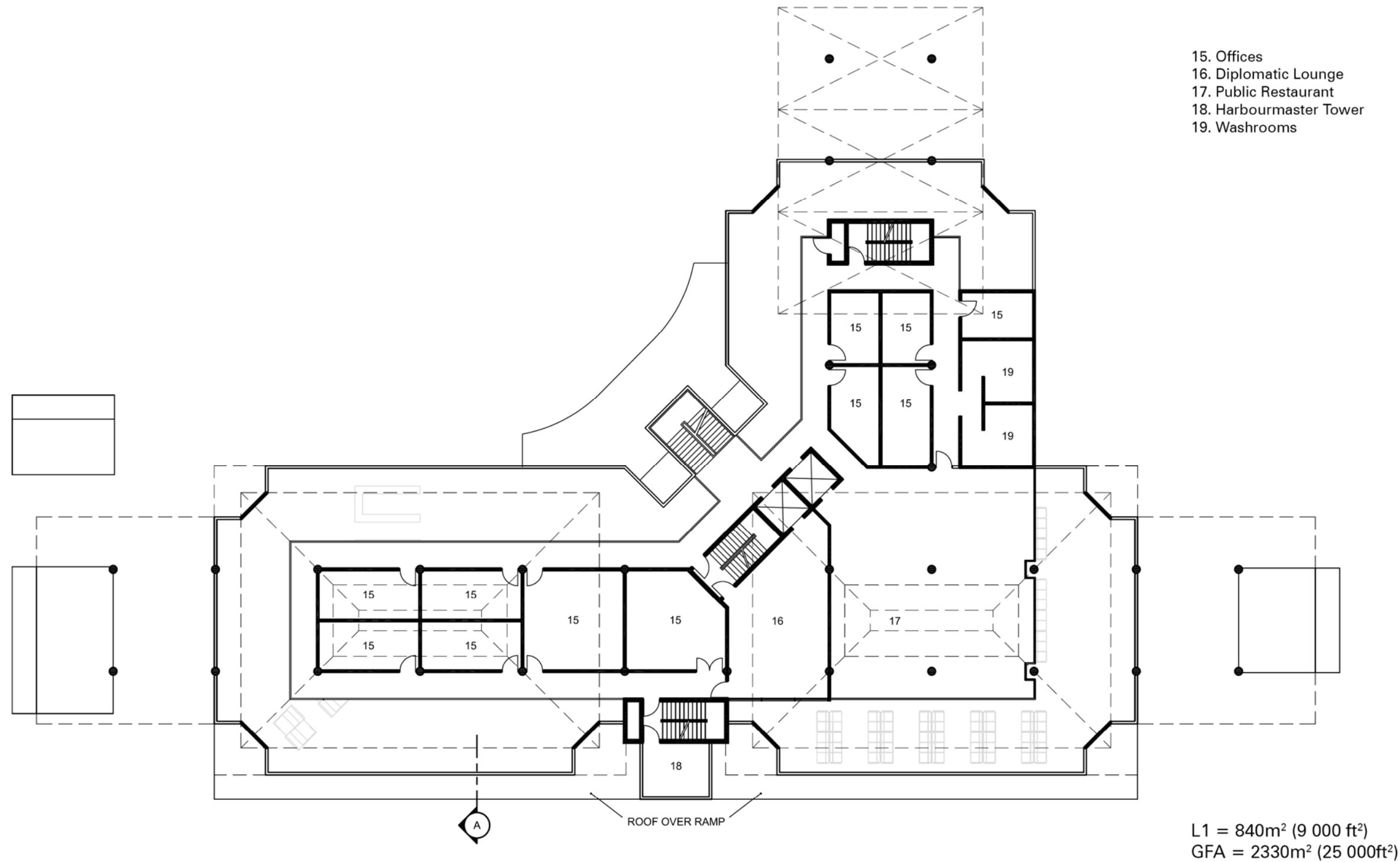




**ANGUILLA, BLOWING POINT PORT MASTER PLAN**  
 OPTION 2 - GROUND FLOOR PLAN 1:250

Exhibit III-7.





**ANGUILLA, BLOWING POINT PORT MASTER PLAN**  
**OPTION 2 - SECOND FLOOR PLAN 1:250**

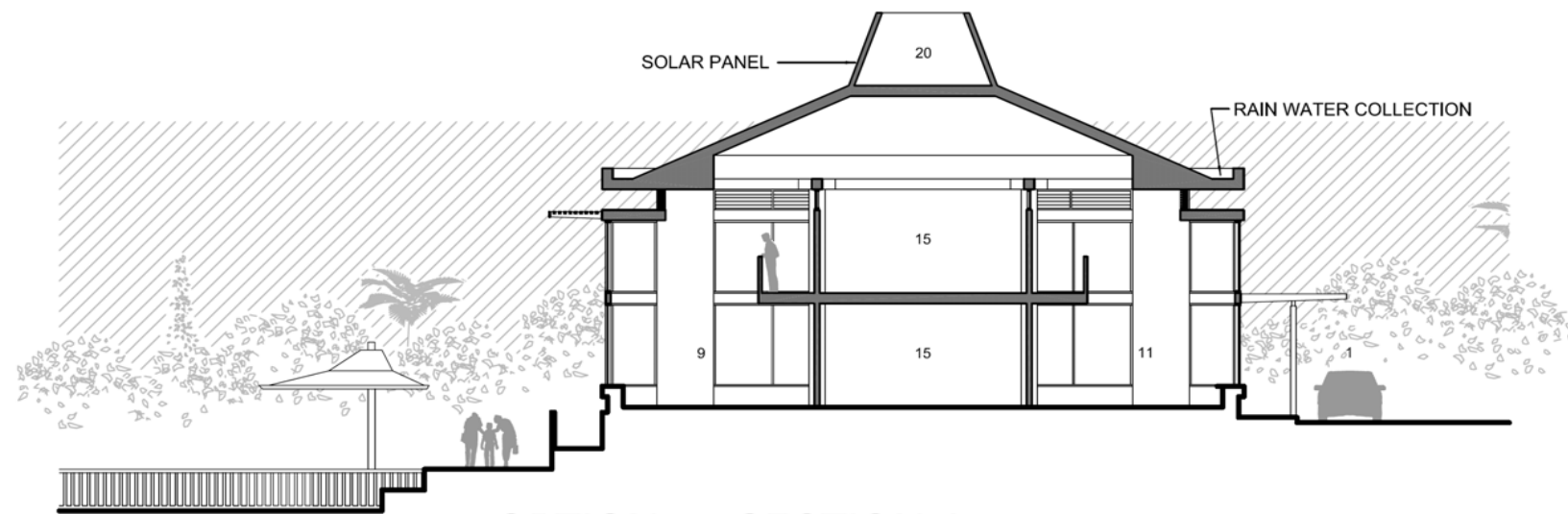
Exhibit III-8.





OPTION 2 - OCEANFRONT ELEVATION 1:200

- 1. Covered Drop-Off
- 9. Immigration
- 11. Customs
- 15. Office
- 20. Mechanical Storage



OPTION 2 - SECTION A 1:200





**ANGUILLA, BLOWING POINT PORT MASTER PLAN**

Exhibit III-10.





**ANGUILLA, BLOWING POINT PORT MASTER PLAN**  
HARBOURMASTER TOWER

Exhibit III-11.





**ANGUILLA, BLOWING POINT PORT MASTER PLAN**  
VIEW FROM CARPARK

Exhibit III-12.

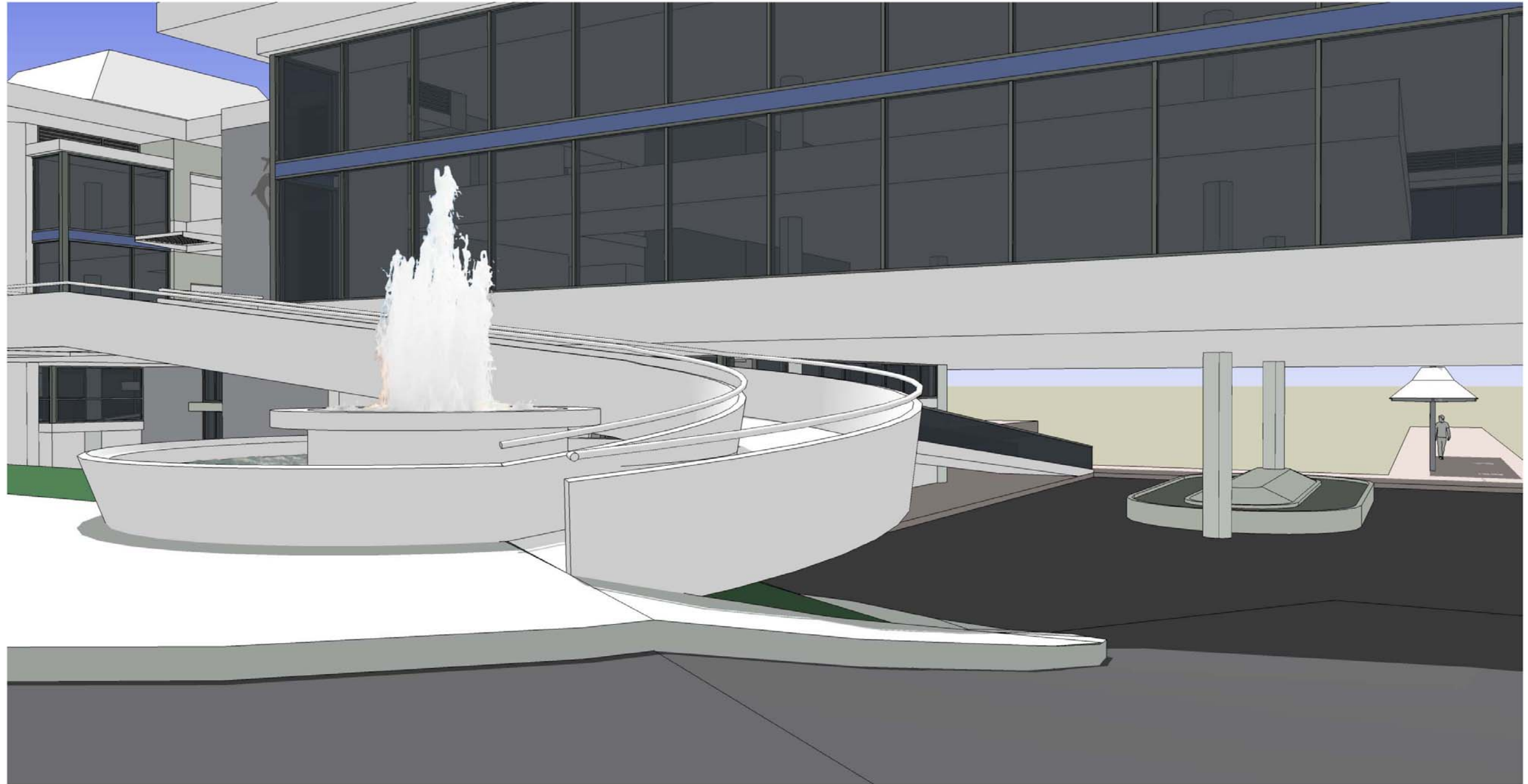




**ANGUILLA, BLOWING POINT PORT MASTER PLAN**  
DROP-OFF / PICK-UP CANOPIES

Exhibit III-13.





ANGUILLA, BLOWING POINT PORT MASTER PLAN  
RAMP

Exhibit III-14.





**ANGUILLA, BLOWING POINT PORT MASTER PLAN**  
VIEW FROM WEST JETTY

Exhibit III-15



# IV. LAND USE & PORT DEVELOPMENT PLAN

## A. Existing Land Use

Prior to 1996, Anguilla had experienced considerable increase in development due largely to the continued growth of the tourism sector. The increase triggered unprecedented levels of construction activity with the development, expansion and upgrading of hotels, restaurants apartments, residential dwellings and other commercial establishments. However, much of the development took place in an ad-hoc manner and in the absence of a national land use plan. This has resulted in undesirable consequences, which will be exacerbated if the trend continues. (Proposed National Use Plan October 2006)

The National Use Plan, Exhibit IV-1, illustrates existing and proposed land uses for the island at large. With regards to Blowing Point existing land use is classified as residential-resort and residential.

In 1996 the Government of Anguilla's, guided by the Planning Department and assisted by the UNDP/UNCHS, prepared a National Land Use Plan with the intent to provide Government with an increased capability to effect the proper utilisation of its limited land resources in a manner that ensures sustainable development. The Plan also included a recommendation to adopt the proposed Anguilla Building Code. Government's effort to pass legislation failed to have the proposed National Land Use Plan approved. However, the October 1996 National Land Use Plan remains for Government a planning framework and guide in overseeing the development of island lands.

With regards to Blowing Point, the National Land Use Plan (Volume 3) recommended that it be developed as a growth centre to reflect and exploit its coastal location, to create a focus for marine based recreation and tourism activities and to take advantage of opportunities for establishing business linkages between St Martin and Anguilla. This development would inevitably relieve some of the pressure for new commercial development from concentrating in the "The Valley" and provide jobs for the Blowing Point community, thereby serving to increase its growing population and commercial activity.

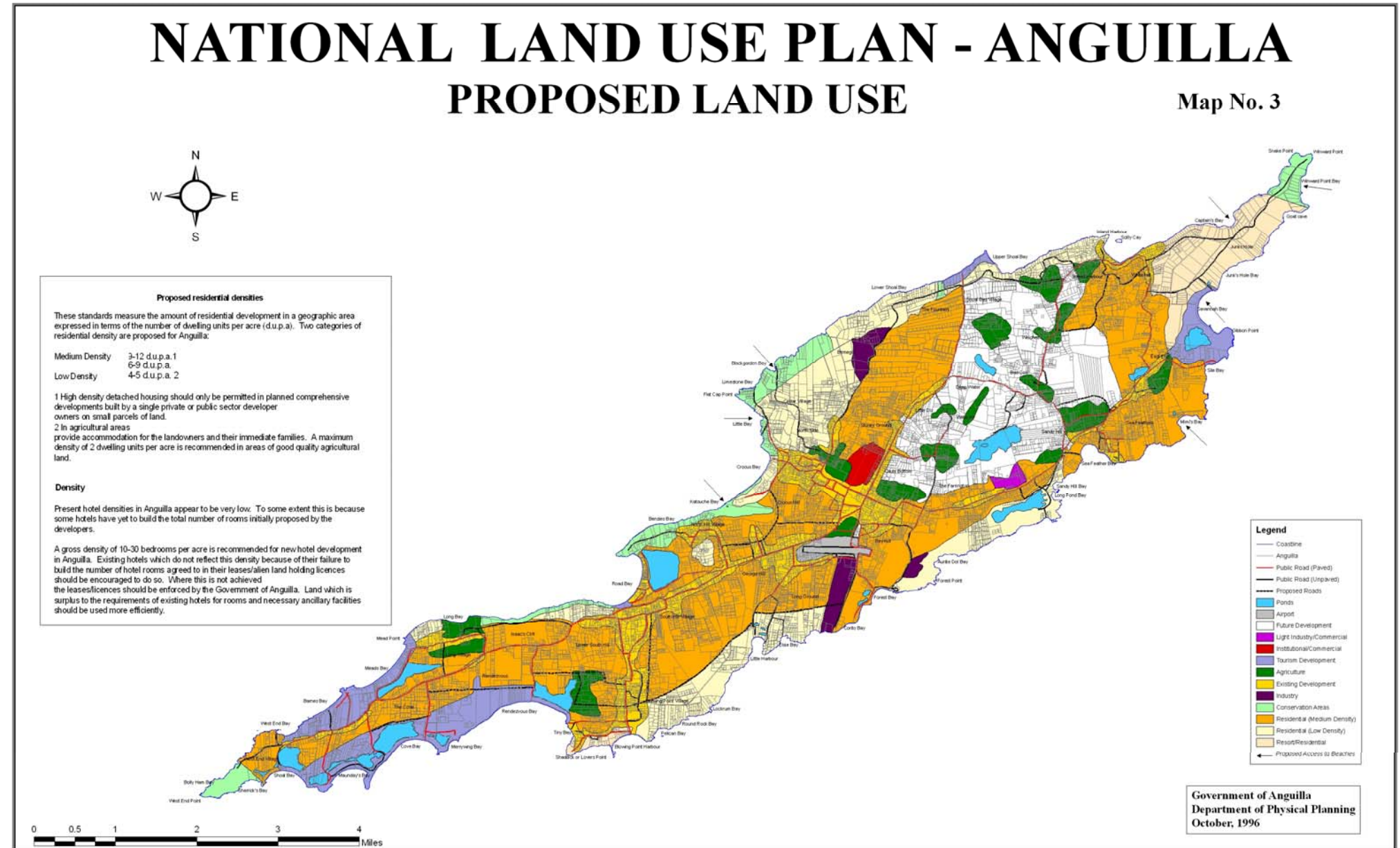


Exhibit IV-1 Proposed National Use Plan



## B. Planning of Port Land

The Government's continued desire to further develop Blowing Point as a commercial and residential growth centre, and as specified in the proposed Anguillian Land Use Plan and re-iterated within the Master Plan Terms of Reference for this project, is an important criterion used in preparing the proposed Land Use Plan for the Port. This vision of Blowing Point requires a mix of commercial, tourism, recreational and residential use in order to develop the area as a balanced community.

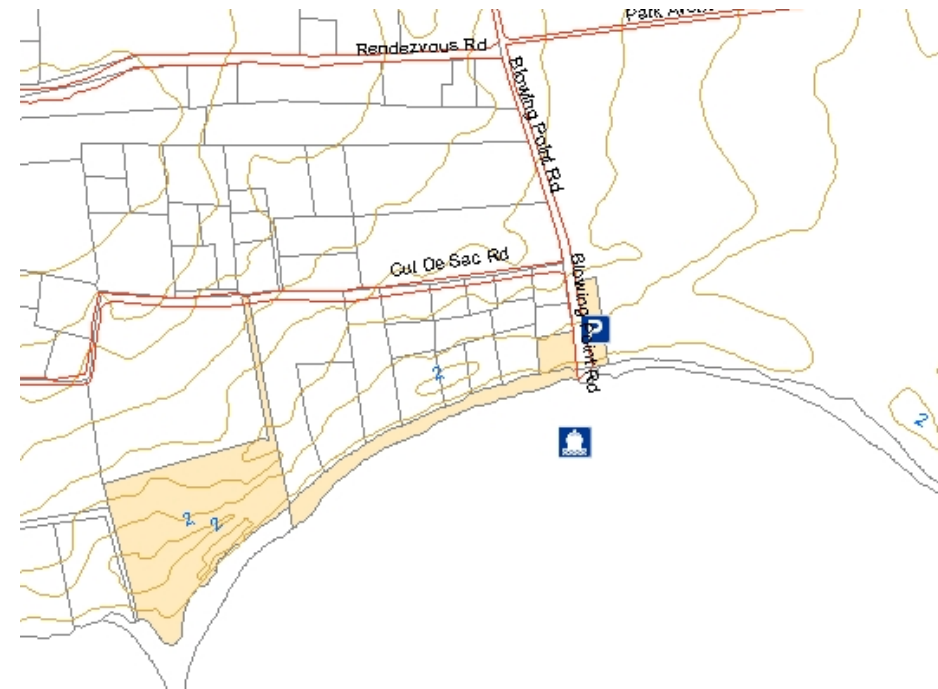
In Anguilla, 95% of the land is privately held in small parcels and Blowing Point is no exception. Exhibit IV-2 illustrates existing parcels of lands that surrounds Port lands. We are of the understanding that Government is currently negotiating to purchase additional lands that would permit the Ferry Terminal operations to expand in parallel with other recreational, residential and commercial activities. Government owned lands are shaded areas whereas other parcels are privately owned.

At the Ferry Port, Government owns about ½ of a hectare that has two small buildings and limited parking facilities; reference Exhibit IV-3.

Given the urgency to construct a larger Terminal due to the inadequate size of the existing facility, our Team designed the Terminal building so that it could be constructed within the limits of existing Port lands. Reference the "Site Development Plan Phase I" as illustrated by Exhibit IV-4. However, parking would be limited to 36 positions; highly inadequate for the current and forecasted passenger traffic through Blowing Point.

The requirement specified by the GOA is for 650 parking positions. Knowing that difficulties and time delays will likely take place during the Government's land acquisition process or its zoning, we are suggesting that the ultimate requirements could be achieved by phasing the implementation of the 20-year Development Plan.

Site Development Plan Phase II, Exhibit IV-5, requires Government to purchase about one additional hectare of land thereby increasing the total Port lands to 1.53 hectares (3.78 acres). The additional land would provide sufficient space for future expansion of the Terminal, beyond 2027, and provide 250 car parking positions as well as the potential to construct a combined service building that could house Port Maintenance Staff, Search and Rescue and the Police. The latter requirements have not been defined in detail by Government and Port Management.



**Exhibit IV-2. Land Ownership – Shaded Area GOA Land**

The ultimate development would require Government to purchase an additional 8.33 hectares of land thereby bringing the total Port land to 9.86 hectares. The control of these lands could also be achieved by a combination of land purchases known as the core area and the remaining lands being properly zoned through Government legislation.

Phase III Site Development Plan provides for future expansion of the Terminal and satisfies the 20 year requirement for 650 car parking positions. The requirement for parking can be achieved by constructing all parking at ground level, as illustrated by Exhibit IV-6, or by constructing a parking structure housing some 560 car park positions with an additional 70 positions being at ground level, as illustrated by Exhibit IV-7.

Phase III Site Development Plan identifies more land that is directly required for Port operations; however, the additional lands could be leased to the private sector to further develop the tourist, commercial and residential nature of the economic development of the Blowing Point community, and to encourage Government to provide additional recreational facilities for Anguillian's to enjoy.

We estimate that the current value of land at Blowing Point, depending if it is water front and its distance from the sea, to range from US-\$20 to US-\$50 per square foot.





**ANGUILLA, BLOWING POINT PORT MASTER PLAN**

Exhibit IV-3

EXISTING SITE PLAN

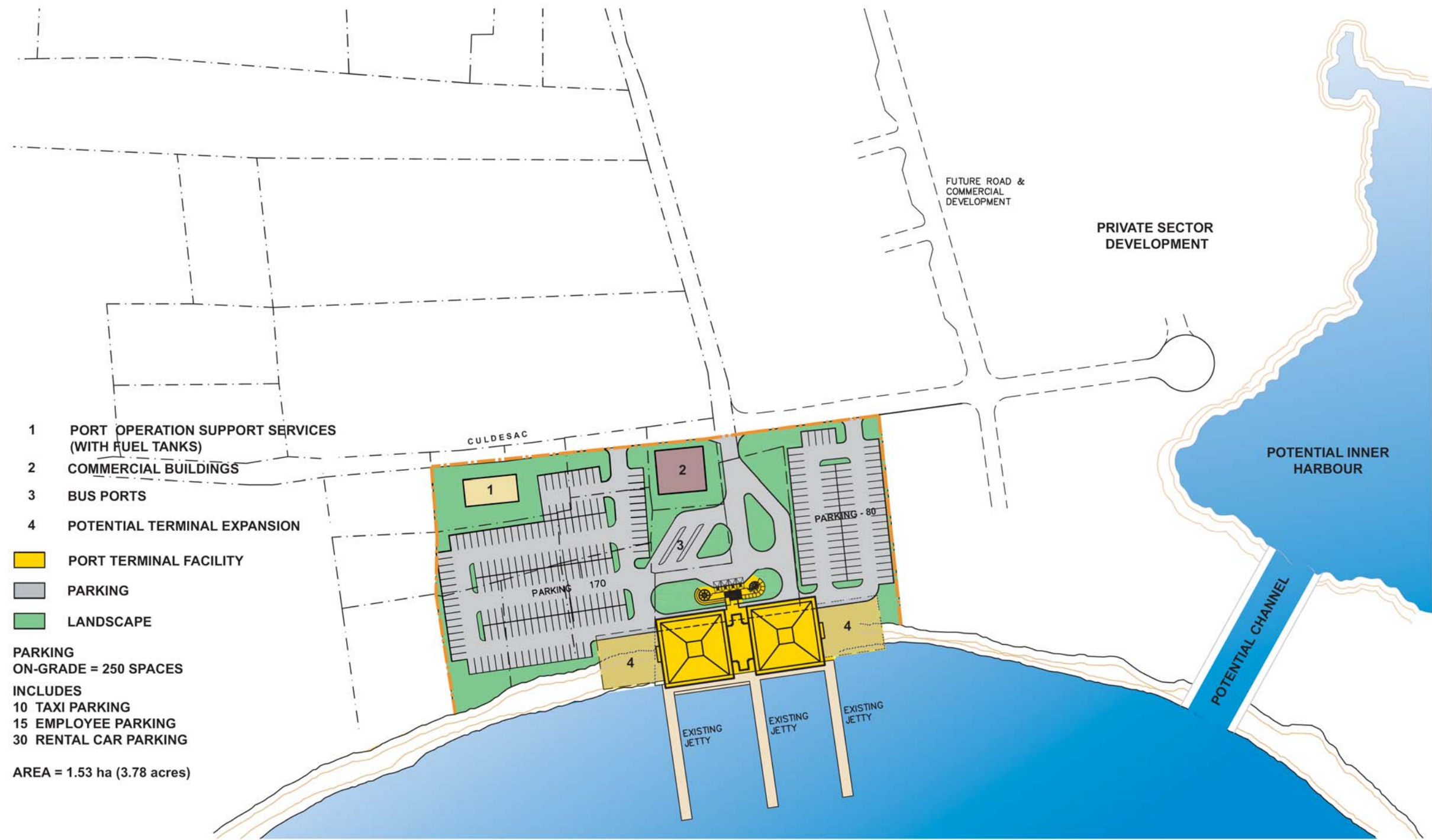




**ANGUILLA, BLOWING POINT PORT MASTER PLAN**  
SITE DEVELOPMENT PLAN - PHASE I (EXISTING PORT LANDS)

Exhibit IV-4





**ANGUILLA, BLOWING POINT PORT MASTER PLAN**  
 SITE DEVELOPMENT PLAN - PHASE II

Exhibit IV-5





**ANGUILLA, BLOWING POINT PORT MASTER PLAN**  
SITE DEVELOPMENT PLAN - PHASE IIIa





**ANGUILLA, BLOWING POINT PORT MASTER PLAN**  
 SITE DEVELOPMENT PLAN - PHASE IIIb

Exhibit IV-7



## C. Cost Estimate of Preferred Option

Cooper Kauffman, Quantity Surveyors from Barbados, have estimated the costs for the construction of the proposed Terminal building and that of a new parking facility including a redesign of the main road. These estimates exclude the possible requirement for a Combined Services Building to house port maintenance, search and rescue, police and other indirectly related Port services.

The estimates are for the selected Option 1 Terminal building design and the Landside parking-road facility for each of the alternate or progressive development phases; Phases I, II, III-a and III-b as described by Exhibits IV-8, 9, 10 & 11.

The cost estimates presume that Government will retain ownership of current Port lands and future land purchases. Port lands would then be leased to the Seaport/Airport Authority when it has been established. The costs for each of the four development alternatives are summarised as:

Phase I Terminal & 36 car parking positions: US-\$13,348,592

Phase II Terminal & 250 car parking positions: US-\$15,428,224

Phase IIIa Terminal & 650 car parking positions: US-\$27,154,224

Phase IIIb Terminal & 650 car parking positions: US-\$16,493,849

The cost of the Terminal building remains constant at US-\$10,573,158 for each of the development alternatives.

## D. Phasing of Development Plan

Given the obvious inadequacies of existing terminal facilities at the Port of Blowing Point, it is recommended that the construction of Phase-I of the Site Development Plan be tendered during the year 2008. Hence the design of the new Terminal would need to be completed, approved and Tender Documents submitted by October 2008.

We estimate that Phase I of the Site Development Plan includes a new Terminal and reconstruction of the parking area and related entrance road within the limits of the existing Port lands (0.42 hectares).

Phase II Site Development Plan requires Government to purchase about 1.1 hectares of additional land and provides the opportunity to increase the number of parking positions from 36 to 250, a

significant improvement to the current situation. We have presume that Phase II will be executed in the year 2015. However, we can presume that the entrance road and parking area constructed under Phase I would require demolition under Phase II as the road layout and parking design could not be maintained. If this alternative is to be selected, the design team would attempt to minimize the impact of moving forward from Phase I to Phase II.

The ultimate Site Development Plan, Phase III, provides the Port with 650 parking positions; either by constructing additional ground level parking as illustrated by Phase III-b or by constructing a parking structure containing some 560 positions, Phase III-a.

There is no doubt that a parking structure is significantly more expensive than ground level parking; however, Government may prefer this alternative as it maximizes the use of limited land for development.

We are of the opinion that the Port could reasonably develop from Phase I to Phase II and to Phase III-b in the longer term.

Alternatively, should the GOA purchase an additional 1.1 hectares of land in 2008 then Phase II Site Development could be initiated in 2009-2010, thereby providing the Port with a new Terminal and 250 car parking positions. Subsequently, Government could purchase an additional 8.33 hectares of land; thereby allowing the construction of additional car parking and commercial development as illustrated by Phase III-b Site Development Plan. Alternatively Government could zone by legislation the use of the additional 8.33 hectares of land and encourage the private sector to provide the additional parking and develop commercial establishments in line with the growth of the Blowing Point Port and community.

It has been our experience that once a commercially oriented Port Authority is established and parking rates are increased to reflect the going rates that the number of car park users drop as alternates are found to be more economical. Hence, we recommend a prudent and gradual approach to constructing additional car parking capacity.

### Exhibit IV-8.

<b>PHASE I - TERMINAL &amp; LANDSIDE DEVELOPMENT PLAN</b>			
Terminal Building approx 27,500 s.f above open ground floor Baggage hall; External Car Park on grade with 36 spaces including 10 Taxi spaces.			
Drawings used Q2A Architectural Concept drawings Site Development Plan - Phase I Ground, Second and Third Floor plan Elevation & Section			
<b>Building Floor Area</b>	<b>M2</b>		<b>US\$</b>
Ground Floor	239.07		
Second Floor	1,648.36		
Third Floor	675.27		
	<u>2,562.70</u> m2		
<b>Building Floor Area</b>	<b>27,585 sf</b>	<b>250.00</b>	<b>6,896,225.70</b>
Ground Floor open area including ramps & storage	984 m2		
<b>Ground Floor open area</b>	<b>10,592 sf</b>	<b>75.00</b>	<b>794,383.20</b>
<b>Specialist Suppliers</b>			
Cabinets	328,285.00		
Seating	67,000.00		
	<u>395,285.00</u>		
Main Contractors Profit 5%	19,764.25		415,049.25
<b>Specialist Subcontractors (inc Attendance)</b>			
i Waste Water Plant	680,000.00		
ii Baggage Handling Equipment	700,000.00		
iii X Ray Equipment	770,000.00		
iv Security System	150,000.00		
v Signage	50,000.00		
	<u>2,350,000.00</u>		
Main Contractors Profit 5%	117,500.00		2,467,500.00
		<b>TERMINAL COST</b>	<b>US\$ 10,573,158.15</b>
<b>External Works</b>			
Drainage			
pipework	30,000		
manholes - (8 Nr)	80,000		
			<u>110,000.00</u>
Fencing			15,000.00
Car Parking - (inc. access road)	1,957 m2	275.00	538,175.00
Entrance Feature ramps, stairs, fountain & landscaping			375,000.00
Umbrella Canopies	7 Nr	15,000.00	105,000.00
Ornamental Street Lighting			50,000.00
Upgrading Existing Services			150,000.00
Services			
Electricity		147,500.00	
Water		56,250.00	
Telephone		15,000.00	
		<u>218,750.00</u>	
		<b>EXTERNAL COST</b>	<b>1,561,925.00</b>
			<b>12,135,083.15</b>
Contingency		10%	<u>1,213,508.32</u>
		<b>TOTAL COSTS</b>	<b>US\$ 13,348,591.47</b>



**Exhibit IV-9.**

<b>PHASE II TERMINAL &amp; LANDSIDE DEVELOPMENT PLAN</b>			
Terminal Building approx 27,500 s.f above open ground floor Baggage hall; External Car Park on grade with 250 spaces including 10 Taxi, 15 Employee and 30 Car Rental spaces and Bus Park			
Drawings used Q2A Architectural Concept drawings Site Development Plan - Phase II Ground, Second and Third Floor plan Elevation & Section			
(Terminal same as Phase I)			
	<b>TERMINAL COST</b>		<b>US\$ 10,573,158.15</b>
<b>External Works</b>			
Drainage			
pipework 30,000			
manholes - (8 Nr 80,000)			
		110,000.00	
Fencing			45,000.00
Car Parking - (inc. access r 8,450 m2	275.00		2,323,750.00
Entrance Feature ramps, stairs, fountain & landscaping			400,000.00
Umbrella Canopies 7 Nr	15,000.00		105,000.00
Ornamental Street Lighting			100,000.00
Upgrading Existing Services			150,000.00
Services			
Electricity	147,500.00		
Water	56,250.00		
Telephone	15,000.00		
		218,750.00	
	<b>EXTERNAL COST</b>		<b>3,452,500.00</b>
			<b>14,025,658.15</b>
Contingency 10%			<b>1,402,565.82</b>
	<b>BUDGET ESTIMATE TOTAL</b>		<b>US\$ 15,428,223.97</b>

**Exhibit IV-10.**

<b>PHASE IIIa - TERMINAL &amp; LANDSIDE DEVELOPMENT PLAN</b>			
Terminal Building approx 27,500 s.f above open ground floor Baggage hall; External Two Storey Car Park 560 spaces including 15 Employee and 30 Car Rental spaces on grade Car Park with 90 spaces including 20 taxi spaces and Bus Park			
Drawings used Q2A Architectural Concept drawings Site Development Plan - Phase IIIa Ground, Second and Third Floor plan Elevation & Section			
(Terminal same as Phase I)			
	<b>TERMINAL COST</b>		<b>US\$ 10,573,158.15</b>
<b>External Works</b>			
Drainage			
pipework 30,000			
manholes - (8 Nr 80,000)			
		110,000.00	
Fencing			50,000.00
Two Storey Car Park reinforced in-situ concrete 12,350 m2	950.00		11,732,500.00
Car Parking - (inc. access r 4,350 m2	275.00		1,196,250.00
Entrance Feature ramps, stairs, fountain & landscaping			425,000.00
Umbrella Canopies 7 Nr	15,000.00		105,000.00
Ornamental Street Lighting			125,000.00
Upgrading Existing Services			150,000.00
Services			
Electricity	147,500.00		
Water	56,250.00		
Telephone	15,000.00		
		218,750.00	
	<b>EXTERNAL COST</b>		<b>14,112,500.00</b>
			<b>24,685,658.15</b>
Contingency 10%			<b>2,468,565.82</b>
	<b>BUDGET ESTIMATE TOTAL</b>		<b>US\$ 27,154,223.97</b>

**Exhibit IV-11.**

<b>PHASE IIIb TERMINAL &amp; LANDSIDE DEVELOPMENT PLAN</b>			
Terminal Building approx 27,500 s.f above open ground floor Baggage hall; External Car Park on grade with 650 spaces including 10 Taxi, 15 Employee and 30 Car Rental spaces and Bus Park			
Drawings used Q2A Architectural Concept drawings Site Development Plan - Phase IIIb Ground, Second and Third Floor plan Elevation & Section			
(Terminal same as Phase I)			
	<b>TERMINAL COST</b>		<b>US\$ 10,573,158.15</b>
<b>External Works</b>			
Drainage			
pipework 30,000			
manholes - (8 Nr 80,000)			
		110,000.00	
Fencing			75,000.00
Car Parking - (inc. access r 11,500 m2	275.00		3,162,500.00
Entrance Feature ramps, stairs, fountain & landscaping			425,000.00
Umbrella Canopies 7 Nr	15,000.00		105,000.00
Ornamental Street Lighting			175,000.00
Upgrading Existing Services			150,000.00
Services			
Electricity	147,500.00		
Water	56,250.00		
Telephone	15,000.00		
		218,750.00	
	<b>EXTERNAL COST</b>		<b>4,421,250.00</b>
			<b>14,994,408.15</b>
Contingency 10%			<b>1,499,440.82</b>
	<b>BUDGET ESTIMATE TOTAL</b>		<b>US\$ 16,493,848.97</b>







# V. ENVIRONMENTAL & SOCIAL ASSESSMENT

## A. Introduction

As an integral component of Master Plan preparation, a review was undertaken of the environmental issues related to the proposed development Phases. The review covered in particular the ecological, wider environment and social issues linked to the Master Plan implementation.

The main objectives of this assessment have been to:

1. Identify key potential environmental and social impacts that may arise from the demolition of existing facilities, the construction of the development Programme and ongoing operations of the Port facility.
2. Propose likely generic means of impact mitigation and residual impacts.

During the design phase an Environmental Management Plan (EMP) will be prepared to the project. However, it should be noted that this assessment and the EMP is not meant to replace or satisfy any legislated requirement for a detailed and comprehensive Environmental Assessment, which is considered to be, if required, a separate Study.

The SWOT workshop highlighted that the development of the terminal and landside development will be designed to meet the following environmental objectives:

- Minimize the environmental impact on surrounding communities;
- Promote efficient energy usage and minimize the use of fossil fuels for energy production;
- Promote recycling of waste;
- Promote the use of native vegetation in landscaping; and
- Protect the sea from potential pollution.

Jacobs' environmental staff visited Anguilla during the period of August 20 to 24<sup>th</sup> 2007. During this period a number of stakeholder meetings were carried out to gather information and data on the environmental and social receptors on the Island and specifically at Blowing Point. These meetings and the information provided by stakeholders' forms the basis of this Environmental and Social Assessment. Internet searches were also carried out to provide additional data sources.

A site walkabout of Blowing Point was undertaken in order to identify the main environmental features of the site and potential impact receptors. No detailed environmental or social surveys were undertaken as part of this assessment.

Data sources and reports obtained from a variety of stakeholders are listed in the References at the back of this main report section.

## B. Initial Environmental Assessment

### 1. Ecology

#### *Terrestrial Habitats*

Anguilla, as a whole, has few areas of unaltered terrestrial habitat remaining and it is predominantly covered by semi-natural vegetation (65%) made up of dry evergreen woodlands and scrub. No terrestrial habitat map information was available. It is therefore not clear what the remaining vegetation cover is.

Natural vegetation covers much of the land area around Blowing Point. Habitats mainly comprise low scrubby and thorny vegetation and are indicative of the rocky terrain, dry climate and soil types of the Anguilla (Halcrow, 2004 after the Department of Physical Planning, 1998) (Exhibit III-1 Aerial photos of the site). Beach deposits are present to the east and west of the existing terminal buildings.

Around 150m to the east of the existing Blowing Point terminal is a salt pond locally known as "Blowing Point wetland". This pond is separated from the coastal waters by the intervening beach and mangrove habitats. In high wave events these barriers have been known to be breached and pond waters are mixed with sea water.

Anguilla and surrounding cays have around 23 similar salt ponds that form important ecological areas for birds and other wetlands communities (Draft National Land Use Plans, Vol 2, 1996), including white mangrove (*Laguncularia racemosa*) and buttonwood mangroves (*Conocarpus erectus*).

#### *Terrestrial Species*

Anguilla is thought to have between 443 and 520 species of plants, of which 321 are believed to be indigenous and the remainder introduced (Halcrow, 2004; UK Overseas Territories Conservation Forum (UKOTCF), 2007).

Key tree species known to be present immediately around the site include white cedar (*Tabebuia heterophylla*), loblolly (*Pinus subcordata*), mahogany (*Swietenia mahagoni*), frangipani (*Bourreria succulenta*) and turpentine tree (*Bursera simaruba*) (Draft National Land Use Plans, Vol 2, 1996).

*Rondeletia anguillensis* (no common name) is classified as an endemic species (UKOTCF, 2007). It is not present in or near Blowing Point, but is thought to be present at the east end of the island (Harvard accessed December 2007) and in the vicinity of Little Bay, near Flat Cap Point (JNCC after Howard & Kellogg 1987).

The diversity of terrestrial fauna is reported to be low for a fringing island; with five species of native bats, a variety of birds (sea birds, shorebirds, waders, migratory), ten species of lizard and one species each of snake, frog and land tortoise (Halcrow, 2004).

Anguilla has three endemic species of reptiles and with the exception of the Lesser Antillean iguana (*Iguana delicatissima* and land tortoise (*Geochelone in.*), reptiles are abundant on Anguilla.

The iguana is threatened on the island as a result of tree felling and grazing by feral goats: only about 50 individuals remain (JNCC). The population is therefore considered critical on Anguilla (IUNC, accessed 2007). However, no reports have been made of the iguana in the area around Blowing Point (Damien Hughes, pers. comm.).

#### *Bird Monitoring Data*

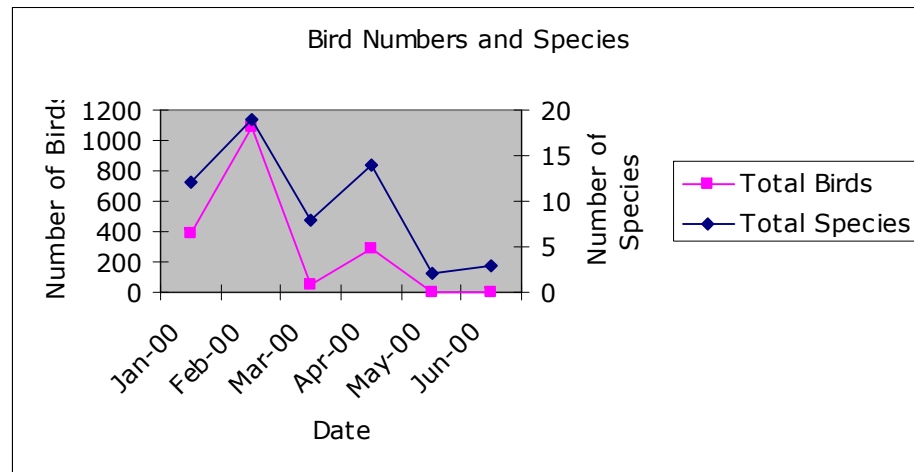
Bird monitoring data for Blowing Point harbour is only available for 2000. Counts carried out in January and June of that year found a total of 7 species present, all of which are classified as 'of least concern' on the IUCN Red List website<sup>16</sup> (based on data from a 2001 survey)

Blowing Point wetland provides shelter and nesting habitat for migratory species (Karim Hodge, pers. comms). Bird monitoring data is available for this site from January to June of 2000. Given the potential development of the Blowing Point wetland as part of the Master Plan the following section is reasonably detailed to facilitate the identification of possible associated impacts on bird population and appropriate mitigation measures.

<sup>16</sup> <http://www.iucnredlist.org/search/search-basic>



Exhibit V-1 below shows the number of birds and the number of different species recorded during these counts. It shows that bird numbers are highest early in the year and decline steadily as the year progresses.



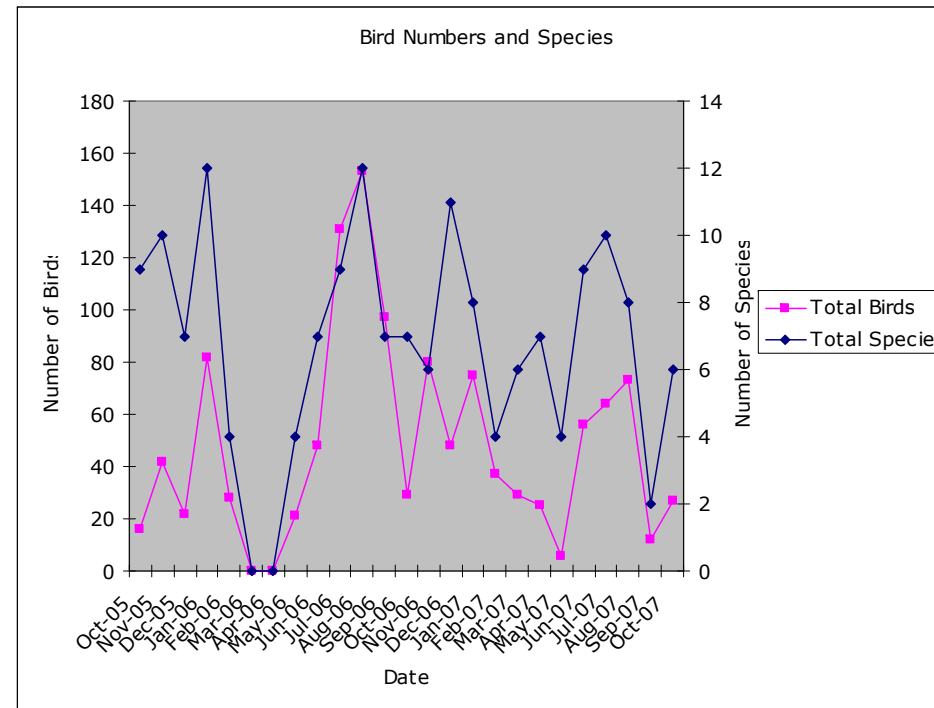
**Exhibit V-1. Blowing Point Wetland Bird Monitoring Data 2000**

Monitoring at the Blowing Point wetland resumed in October of 2005. A similar set of species as recorded in 2000 has been recorded at the site since that time. Exhibit V-2 shows the distribution of these species on a monthly basis. As in 2000, it is clear from this graph that the number of birds and species at this site varies throughout the year. In 2006, peaks appear to occur in January, July to September and November and troughs in March and April. In 2007, peaks were witnessed in January and in July and August. No data is available yet for November, so it is not clear if the 2006 pattern is an annual occurrence. Troughs occurred in May and September of 2007 at this site.

Unfortunately no reference reports have been located that present a discussion of the migratory patterns or general annual trends of these migratory bird species at this site.

All species with confirmed sightings recorded at this site between October 2005 and October 2007 are listed as 'of least concern' by the IUCN. However, it should be noted that in January of 2006 there were unconfirmed sightings<sup>17</sup> of the West Indian whistling duck. This species is regionally endangered. No subsequent sightings have been made of this species in this location since then and Anguilla is not listed as within the birds' normal geographical distribution range (Audubon, accessed 18/12/07).

<sup>17</sup> Unconfirmed sightings mean that no photo id was provided and the bird was seen by only one person.



**Exhibit V-2. Blowing Point Wetland Bird Monitoring Data 2005 to 2007**

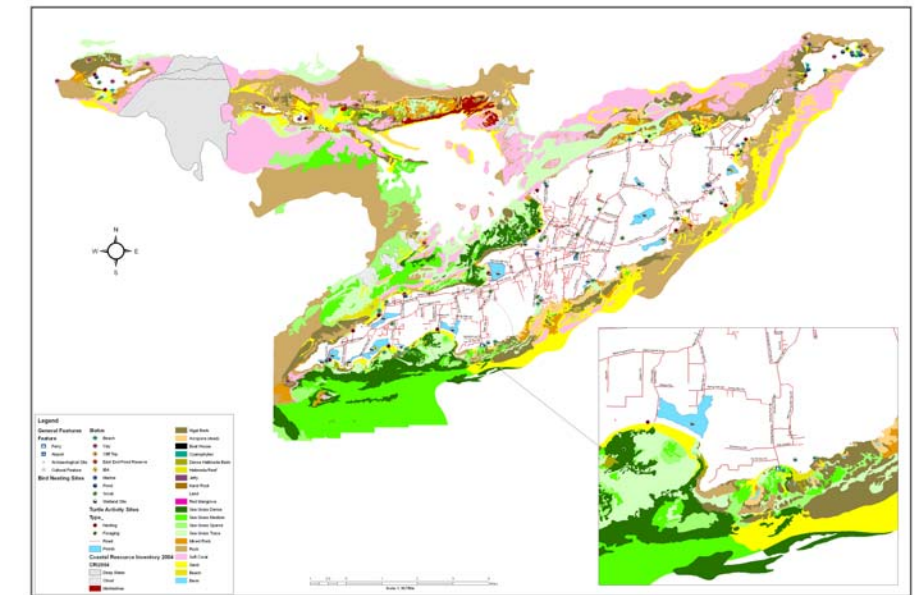
**Marine Habitats**

Anguilla hosts a diversity of marine habitats, including extensive fringing coral reefs lagoons, sea grass beds and beaches. Coral reefs in particular provide important biodiversity, fisheries and coastal protection functions and in addition to their commercial value, they have a large recreational potential.

A detailed GIS based database (AXACRIS) has been produced using satellite imagery (IKONOS) which holds data on the marine habitats around the island. The AXACRIS database indicates that in the inshore waters there are small areas of halimeda reefs<sup>18</sup> on the northern side of the island with larger soft coral reefs locations mainly to the north and south east of the island (see Exhibit V-3). The 17 km-long reef along the south-east coast is considered to be one of the most important largely unbroken reefs in the eastern Caribbean (JNCC, ref).

The quality of the coral and sea grass beds around the island has been severely damaged by recent hurricanes. It was noted also that much of the coral around the island is dead and inshore reefs are dominated by algae. However it is thought that coral recruitment is underway in some selected sites (James Gums,

<sup>18</sup> Halimeda is a type of calcareous or calcified algae.



**Exhibit V-3. AXACRIS Marine Habitat Map**

pers. comm.). According to the Reefs at Risk analysis, all of Anguilla's reefs are threatened by human activities. The most pervasive threats are overfishing and coastal development threatening 100 percent and 67 percent of reefs, respectively. Neither marine-based pollution nor sedimentation shows any threat to reefs (World Resource Institute). Tourism development is said to have had little impact, because many of the reefs are offshore, but the many visitors result in anchor damage and breakage of shallow corals by snorkellers (Australian Institute of Marine Science).

The AXACRIS data suggests that the seabed immediately fronting Blowing Point harbour is a mix of sand, algal beds and sea grass beds. There are likely to be no significant coral reef resources on the site however it may be appropriate as part of the Environmental Management Plan to carry out a site survey to confirm this.

**Marine Species**

Anguilla is of regional importance for sea turtle nesting sites (JNCC, date unknown). Hawksbill turtles are believed to be the most abundant species nesting in Anguilla, with smaller numbers of leatherbacks and green sea turtle nests, and no reliable reports of loggerhead nesting (Godley *et al* 2004 after Meylan 1983). Godley *et al* 2004 also notes that there are no quantitative data in the literature to give an indication of historical nesting levels and it is therefore impossible to state with any confidence how current nesting compares to past levels.



The Department of Fisheries and Marine Resources have no record of sea turtles using the areas around Blowing Point as a nesting ground (Damien Hughes pers. comm.). However it was noted by the Director of Fisheries (James Gumms, pers. comm.) that sea turtles do use the area around Blowing Point. The nature of this 'use' is assumed to be for foraging.

The leatherback, green and hawksbill sea turtle are recognised by the Convention on International Trade in Endangered Species (CITES) as endangered and the loggerhead sea turtle is considered threatened. While Anguilla is not a signatory to the CITES, the Government does recognise its importance and does not currently sanction trade in turtle products.

### Fisheries

The local fishing industry is largely artisanal with some subsistence fishing also carried out. In general the near-shore areas in Anguilla (less than 1 to 2 miles from shore), other than Shoal Bay, are only utilised by a few subsistence fishermen. Artisanal fishing is therefore mainly confined to offshore locations.

The artisanal fisheries may be divided between lobster and finfish fisheries. It is estimated that around 300 fishing boats operating in Anguilla, about 18 of which are moored in Blowing Point bay. Between 30 and 35 fishermen are thought to operate out of the Blowing Point area (James Gumms, pers. comm.). However, actual fishing activity in the Blowing Point Harbour is low. Finfish boats mainly work from the south-western harbours, including Sandy Ground, whilst lobster boats mainly operate from the north-eastern harbours (Halcrow, 2004).

## 2. Water Quality and Water Resources

There are no permanent surface watercourses in Anguilla. Potable water comes from rainwater collections, groundwater abstractions from wells and reverse-osmosis treatment of salt water. The groundwater is typically saline and so it is necessary to desalinate these waters before distribution. Brooks (2004) highlights that one possible impact of climate change for Anguilla may be a decline in rainfall which could result in a change in water levels.

At the terminal the preferred source of water is to collect rainwater from cisterns into holding tanks constructed within the premises. A secondary source of water is from two main aquifers on the island. Residents in the areas are also known to buy bottled water due; it is understood, to some level of mistrust over the quality or dislike for the taste of the potable supply.

In general the water quality around the island is excellent with samples meeting World Health Organisation (WHO) guideline values (Halcrow, 2004). Coastal bathing waters quality was

monitored at a number of sites until monitoring ceased in 2005. There was no water quality monitoring point at Blowing Point, however the closest monitoring points were at Little Harbour and Rendezvous Bay to the north east and south west respectively. Data for 2004 shows that at these sites samples were well within WHO guideline values (Maureen Richardson, pers comm.).

It is however known that the current septic system for the processing of wastewater at the terminal is inadequate for the current and long term development of the terminal facilities. Waste water is currently only subject to settlement and filtration and is known to seep into adjacent coastal waters in its untreated form.

## 3. Noise and Air Quality

At Blowing Point the presence of ships and ferries along with vehicular traffic using the port produce local exhaust emissions; however these are thought likely to be dispersed in the constant breeze. It is clear that the existing port activities produce noise, from boat engines mainly. In addition, increased noise levels are currently expected on days when there is a lot of passenger travel to and from St Martin – Saturdays, holidays etc.

There is no air quality monitoring carried out on the island (Karim Hodge, pers comms.). There is no specific legislation or regulation relating to noise in Anguilla, other than that relating to the use of amplifiers or loudspeakers (the Sound Amplification (Restriction) Act).

## 4. Landscape and Visual

Anguilla depends on its visual attractiveness as the basis for its tourism industry. However the Draft National Land Use Plan (1996) does not contain specific policies relating to landscape. At Blowing Point terminal the land has a mixed use with shops, restaurant and car parking taking over much of the areas adjacent to the terminal buildings. There is an unplanned feeling about the location. The image of the Port from the landside is said to be poor, disorderly and crowded while the image of the Port from the sea is modest with little sense of place. There is however an attractive beach to the east of the terminal building and views out to sea are of fishing boats, moored ferries and of St Martin.

## 5. Natural Hazards

### Hurricanes and Flooding

Anguilla sits in the centre of the Atlantic hurricane belt. Temperatures remain relatively high throughout the year, averaging in the low to mid 80's (°F). Rainfall can be highly

variable throughout the year, with the wettest months generally in September and October, and the driest in early spring (February and March). These rainfall patterns are directly connected to the hurricane season which falls between June and October.

Anguilla is a low-lying island and is therefore particularly vulnerable to storm surge and wave induced erosion which accompany hurricanes. The island has been hit by a number of tropical storms (TS) and hurricanes in the last decade or so (see Exhibit V-4), with hurricanes Luis (1995) and Lenny (1999) being the worst in recent times. Most of the damage was as a result of storm surge and flooding. These hurricanes resulted in extensive flooding in areas such as The Valley and The Bottom located north east of Blowing Point. Some areas of The Valley are said to have been inundated with more than 10 feet of water which took days to recede (CDERA, 2003)

### Exhibit V-4. Record of tropical storms and hurricanes in Anguilla

Date	Wind	Category	Name
Sep 1995	132	4	LUIS
Jul 1996	81	1	BERTHA
Aug 1998	52	TS	BONNIE
Sep 1998	109	2	GEORGES
Oct 1999	86	1	JOSE
Nov 1999	144	4	LENNY
Aug 2000	75	1	DEBBY
Aug 2006	63	TS	CHRIS

Source: [http://stormcarib.com/climatology/TQPF\\_all\\_isl.htm](http://stormcarib.com/climatology/TQPF_all_isl.htm)

In addition to causing catastrophic damage to people and properties, hurricanes cause damage to the beaches, mangroves, sea-grass beds and coral reefs of Anguilla. After hurricane Luis many of the beaches were covered with thick carpets, more than 1 metre thick, of dead sea-grass. Offshore surveys carried out after Hurricane Luis indicated that 20% of rich sea-grass beds present before the hurricane were reduced to traces in 1996 (COSALC, 1997 after Bythell and Buchan, 1996).

Young (2005) notes that there is a likelihood of continued high level of hurricane activity in the Atlantic for the next 20 years and also of growing impacts of climate change which will lead to greater vulnerability on islands such as Anguilla.

There are four main areas on the island prone to flooding. These are the Valley, Sandy Ground, the East End and Island Harbour, none of which are near Blowing Point. However, the residential area to the west of the Blowing Point terminal called Cul de Sac is also known to be prone to flooding. Flooding on the island is due to storm surges and heavy rains. The highest storm surge recorded



on the island was 12 foot following a category 1 hurricane (Elizabeth Klute, pers comm.)

Anguilla has a National Disaster Preparedness Committee and a plan in place to reduce the risk to life and property should a severe hurricane hit the island. The Bill for the Disaster Management Act, 2007 seeks to provide for the effective organization of the preparedness, management, mitigation of, response to and recovery from natural and man-made emergencies and disasters in Anguilla.

### **Coastal Erosion and Landslides**

Anguilla's beaches serve a number of important functions:

- Protect coastal lands from wave action, especially during hurricanes;
- Provide an important recreational resource for tourists and local residents;
- Maintain habitats for coastal plants and animals, and nesting sites for sea turtles,
- Provide a source of fine aggregate for construction; and
- Maintain aesthetically pleasing and culturally important parts of the environment.

However, beach erosion is a cause of growing concern on the island. Initially this was due to sand mining for construction materials; however this has now been halted on beaches and dunes except for at Windward Point. Hurricanes pose a significant risk in this regard and on average beaches narrowed by 8.7m (29ft) following Hurricane Luis.

The 'Coast and Beach Stability in the Lesser Antilles' (COSALC) project (1997) note a number of other factors affecting beach erosion rates are:

- Pollution and boat anchors damage coral reefs, which supply nearly all of Anguilla's beach sand. As the reefs are damaged, they provide beaches with less sand, and are less able to protect the beaches from high wave energy.
- Winter storms in the North Atlantic generate high swell waves known as "groundseas," which especially affect the northern coasts of Anguilla and her cays.
- Although official information on sea level changes in Anguilla is not yet available, scientists concur that sea level rise related to the "greenhouse effect" also causes beach erosion. Tectonic movements are also contributing.
- Some sea defence structures may result in beach erosion. Groynes and jetties may result in accretion on one side, while

causing erosion on the other. All sea defences should be carefully designed.

Several areas of the coast are also prone to landslides which are worsened with the occurrence of high rainfall.

Blowing Point bay area is subject to wind and swells predominantly coming from the east. The bay is protected some what by the presence of coral reefs and berms<sup>19</sup> consisting of mainly dead coral and coral rubble (Halcrow, 2004).

### **Climate Change and Sea Level Rise**

Brooks (2004) highlights the following possible climate change effects and their general impacts on Caribbean Islands, and consequently, the island of Anguilla<sup>20</sup>:

- **Increase in sea surface and atmospheric temperature**
- **Coral bleaching and destruction of coral reefs**
  - Biodiversity loss – temperature sensitive organisms (aquatic and land based)
  - Warmer temperatures
  - Increased air and water pollution
  - Resurgence of vectors and vector borne diseases
  - Risk of wildfires
- **Changes in rainfall frequency and intensity**
  - Droughts or floods
- **Decreased fresh water availability**
  - Change in water levels due to the decline in rainfall.
- **Changes in storm activity**
  - More intense hurricanes and tropical storms
  - Disruption/demolition of sanitation and sewage disposal systems as well as storm water drainage
  - Loss of important coastline defences and coastal ecosystems – mangroves, sand dunes, coral reefs, sea grass beds
- **Sea level rise**
- **Saline intrusion into freshwater aquifers**
- **Coastal flooding and erosion**
  - Loss of coastal ecosystems (habitats, species, mangroves)
  - Larger sea swells
  - Increase in storm surge
  - Damage to coastal communities and road networks

As the population and economic activities tend to concentrate in the coastal zones, sea level rise threatens a disproportionate

<sup>19</sup> A berm is a level space, shelf, or raised barrier separating two areas.

<sup>20</sup> Adaptation to Climate Change Project (CPACC) and the Adaptation to Climate Change in the Caribbean Project (ACCC) and a report from the Caribbean Disaster Risk Management Brainstorming Workshop prepared by the Caribbean Disaster Emergency Response Agency (CEDERA)

share of the industrial, tourism, energy, transport and communication infrastructure of the island (Halcrow, 2004).

## **6. Waste Management**

All wastes go to the island's only landfill site located at Corito Bay. The only exception is for a small number of glass bottles which are collected and sent to Trinidad for recycling. Incineration at this landfill site no longer takes place.

There is no central sewerage treatment on the island. Human waste is disposed of using septic tanks/ soakaways, aqua privies, package sewage treatment plant or pit latrines.

The Blowing Point terminal has a three compartment septic tank systems with anaerobic digestion and sludge capture. However, it is known that the contents leak into the surrounding sands and is therefore highly likely to end up in the ocean.

Garbage is disposed of into waste collection bins on the outside of the Terminal and transferred to a landfill facility. The open-air facility is a concern regarding infestation of small animals and vermin.

## **7. Material Use and Energy**

The island has few significant sources of raw materials. Raw materials for construction are sourced from other islands, mainly Costa Rica. Aggregates are imported from other downward islands. The salt ponds in the past supported a thriving salt industry but are now abandoned.

No renewable energy sources exist on the island. Anguilla has a diesel operated power generation plant at Corito Bay. There is some discussion of implementing wind generating power plants but the idea is at its early stages. The plant generates sufficient power for the Island.

The Port area has emergency generating equipment providing some 70 KVA of electricity as back-up to terminal operations during main electrical outages.

Light standards on the jetties are new and light bulbs are of the high-pressure sodium type. The terminal generally makes use of fluorescent light fixtures.

It is understood that a Renewable Energy Policy is being drafted on behalf of the Anguilla Government by Dr Peter Lilienthal of Boulder, Colorado (Damien Hughes pers. comm.). A draft copy of this has not been available for consultation so it is not possible to comment on whether the proposed development fits well within this policy.



### Fuel Supply

Two 5000 litre (2000-gal.) fuel tanks are located on the property to the northeast of the terminal building. The fuel is piped along a line mid-way of the site and towards the Service-Maintenance jetty. There is current discussion of relocating the fuel-tanks to the east and for these to have a more direct route for the fuel line to the point of use.

## 8. Cultural Heritage

Anguilla has a rich archaeological record reflecting many years of human habitation. There are 39 recorded settlements on the main island which date back to the Arawaks in pre-Columbian times, the most famous of which is Fountain Cave. Rendezvous Bay, located to the west of Blowing Point, is also known to have a large Indian site, with visible mounds (Anguilla Archaeological and Historical Society Review (AAHS), 1881-1985).

At Blowing Point there is a site of archaeological significance located on eastern side of Blowing Point Harbour and Blowing Point itself. The site lies between the sea and a seasonal salt pond. The Blowing Point jetty, ferry terminal, and Customs House lie to the west of the site (Crock & Petersen, 1999).

No formal assessment of this site has ever been made however Crock & Petersen (1999) note that the Blowing Point site was first identified by the AAHS in 1984 or 1985, and surface collections at the site were limited to one or two visits. The collection includes a total of 74 artefacts, mostly ceramic shards. These artefacts suggest the site is post-Saladoid in age, ca. A.D. 900-1200, or later.

## C. Initial Social Assessment

### 1. Land Use and Land Ownership

Following the difficulties of getting approval for the Draft National Land Use Plan (1996) it has not been possible to put in place "The Planning Bill", which was drafted in 1997 that could be used to control the existing often *ad hoc* nature of development on the island. A code of building practice does however exist and the hope is that this can be incorporated into the Planning Bill if this is enacted. Therefore, the need for an EIA for developments is mainly defined by the scope of coastal works involved in the development rather than any overriding legal framework.

The Draft Land Use Plan (1996) notes that there has been considerable increase in development taking place in Anguilla. There have been unprecedented levels of construction activities with the development, expansion and upgrading of hotels, apartments, private home and commercial properties. This has not ceased since the plan was written in 1996 and as a result of the lack of a national physical development plan has produced undesirable outcomes.

As previously noted in the report, the areas around Blowing Point terminal is of mixed land use with a number of restaurants, shops and parking areas. However much of the areas are vacant lands with natural or semi-natural vegetative cover.

The Draft National Land Use Plan (1996) shows the areas around Blowing Point as zoned for resort /residential development.

Between the Government owned land at the Terminal and the large Government owned plot to the east of Blowing Point harbour (Reference Exhibit IV-2 Land Ownership), there are seven privately owned plots of land which have beach front access. here are a further 10 plots behind these. The land to the west of the existing terminal (excluding a small Government owned plot) is owned by 1 land owner.

### 2. Community Change

The 2001 census estimated the population of Anguilla to be approximately 11,561 in 2001. The population in 2007 is estimated by the CIA World Factbook to be 13,677. The average annual growth rate of the population is 2.8% however in the nine year period, from 1992 to 2001, the population increased by 28%. In 2001, 73% of the islands population were Anguillians, while 37% were non-Anguillian (Anguilla Statistics Department).

Unemployment was relatively low at 6.7% in May of 2001 but rose to 7.8% in July 2002 (Statistics Department). There is no social welfare or unemployment benefit system available to residents on the island. Social Security is however paid by both the employer (5%) and the employee (5%).

The Blowing Point community is said to be a close knit one with a strong heritage in fishing. In recent times it has seen some diversification with the influx of resident mainly from other Caribbean countries. The population of Blowing Point was 779 in 2001 (down 3% on 1992 level). This represented around 7% of the total population at that time. Of these 75% (588) were Anguillian.

## D. Initial Environmental Impact Assessment

### 1. Introduction

This assessment considers the potential impacts that may result from all components of the Master Plan as currently proposed. Phase I is assumed to represent the development that will be completed immediately. It is assumed that other Phases of development are to be completed over the coming 20 years, dependant on availability funds and land. The current schematic of the design includes the concept to develop the Blowing Point wetland to provide marina or recreation facilities at some point in the future.

Direct, indirect (where appropriate) and cumulative impacts will be considered as part of the impact assessment. The assessment will explicitly identify the potential impacts associated with each of these stages of development only where these are likely to differ significantly.

It is understood that the redevelopment and expansion on the Blowing Point terminal will not in itself directly result in an increase in passengers using the terminal facilities or visitors to the island as the number of passenger ferries using the terminal is limited by the dock space which will not be altered under the proposed Master Plan development.

The forecasted increase in passengers using the terminal are likely to result from ongoing population growth, the expansion of the island's tourism industry and the construction of a significant number of hotel beds as previously discussed under Forecasts.

It is therefore considered appropriate to assume that in most cases the development of the Blowing Point Master Plan will not in itself result in significant off site impacts to the island's environment or social structure. Indirect or off-site impacts that may result from this development will be highlighted in the relevant and upcoming report sections.

### 2. Ecology

#### Demolition and Construction

#### Terrestrial Ecology

No significant direct impacts to vegetation in and around the terminal site are expected to result from the demolition or



construction of the new terminal. The vegetation in the area is generally considered to be of low conservation or biodiversity value. Nevertheless, it may be prudent to conduct a site survey to check for the presence of *Rondeletia anguillensis* before construction activities commence.

It is evident that a large number of migratory bird species use the Blowing Point wetland and surrounds for shelter and breeding habitat. Runoff from rainfall, especially during construction, could result in contamination and siltation of the wetland. The potential for this impact to be realised will be greater under Phases II and III due to the proximity of the development to the wetland and the additional area of land take involved.

No significant direct impacts on other terrestrial fauna are expected to result from construction of the proposed terminal as no species of conservation interest have been confirmed as present in the area.

The option to develop the Blowing Point wetland would result in the loss of this habitat for all species using the site. The significance of this loss is unknown at present. It would be necessary to investigate the extent of equivalent alternative habitats in order to estimate the significance of this loss.

#### Marine Ecology and Fisheries

As per impacts on terrestrial ecology, run-off from construction activities at the site has the potential to directly impact on the marine environment also. Sediment transported in run-off could negatively impact on the sea bed habitats in Blowing Point bay. This, in turn, could have an indirect impact on marine life dependant on the existing substrates. If sea turtles are using the area for foraging, this may also negatively impact on their ability to do so.

No significant direct or indirect impacts to fisheries are expected to result from the construction activities on site.

### 3. Operation

#### Terrestrial Ecology

Direct impacts to terrestrial ecology associated with the operation on the redeveloped terminal and associated developments are expected to be related solely to the additional land take required under each of the proposed Phases of development. The terminal footprint will be significantly larger than it currently is, increasing to 2,353 square metres. As noted above however the vegetation in the area is generally considered to be of low conservation or biodiversity value.

If an inner harbour is created at the site of the current Blowing Point wetland for further commercial development a significant impact on the existing bird and other wetland communities can be expected. It is not known how critical the populations and communities of species (migratory birds, mangroves etc) present at the Blowing Point wetland are to the island's overall populations of these species.

#### Marine Ecology and Fisheries

As the redevelopment and expansion of the terminal involves only landside development and is assumed not in itself to result in an increase in ferry activities, no significant negative impacts (direct or indirect) are likely to result from the operation on this terminal. If the terminal redevelopment does however increase ferry traffic directly, this may result in impacts on sea bed vegetation in Blowing Point bay. As with construction impacts, this might indirectly impact on the foraging of sea turtles if this goes on in the bay.

The improvement to waste water treatment which will form part of the Master Plan development are likely to result in a direct benefit to water quality in the bay as it is thought currently that untreated waste water seeps out of the holding tanks at the terminal.

No significant direct or indirect impacts to fisheries are expected to result from the operation of the terminal.

#### Potential Mitigation

It is expected that the following mitigation measures would be applied:

- On site surveys to confirm the absence of species of conservation interest at or adjacent to the site.
- Timing of works to avoid sensitive breeding seasons for species using the area, specifically the salt pond. Further investigation would be required to confirm which species are breeding at this site and during which months this occurs.
- Minimising runoff, spillages and discharges during both construction and operation of the terminal. It may be appropriate to introduce codes of conduct for boat operators to ensure that discharges and spillages are minimised. As far as practicable, all run-off water should be captured and treated before release. Primary treatment may be sufficient to remove sediment, assuming run-off is not contaminated with other dangerous substances.
- Silt screens should be used if any marine construction activities are required.

#### Residual Impacts

With appropriate mitigation, construction and operation of Phase I for the proposed terminal and the Phase II planned expansion is unlikely to have a significant direct or indirect residual impact on the terrestrial or marine ecology at Blowing Point.

Given the assumed proximity of the Phase III development to the Blowing Point wetland disturbance is likely to result from the construction and ongoing operation of the proposed recreation and hotel developments. This may be sufficient to permanently impact on the ability of the Blowing Point wetland to sustain healthy populations of migratory birds and other species.

As noted above, it is assumed that the terminal redevelopment and expansion will not in itself result in increased visitor numbers to the island and thus significant off-site or indirect impacts are unlikely.

No mitigation measures have been identified to address the potential loss of the Blowing Point wetland should the option to develop this area be favoured. It may be possible to create new habitat as part of the development. If appropriately planned it might be possible for any new habitat to provide improvements over the existing habitat by encouraging a greater diversity of species to colonise it. However without further assessment, the significance of any impacts associated with the loss of these habitats and species from this location or the potential for biodiversity gains to be realised is therefore unknown.

## 4. Water Quality and Water Resources

#### Demolition, Construction and Operation

The construction and operation of the Development Programme for the terminal are not expected to result in any significant negative impacts on potable water quality. Coastal waters may be affected if run-off, during construction and operation, is not adequately dealt with.

The development will result in a requirement for additional potable water supplies, for passengers using the terminal and staff based on site. With the expected increase in passengers using the terminal this requirement is likely to be significant. As rainwater holding tanks are used as the main source of potable water, it is assumed that the new development will contain adequate capacity to collect sufficient quantities of water to service the terminal's needs.



As it is assumed that the development will not in itself result in increase number of visitors to the island, impacts associated with increases in island wide water requirement are not considered to be indirect impacts of the proposed Development Programme. Should the terminal directly or indirectly result in increase visitors to the island then the associated increased demand for water could be a significant indirect impact of the terminal development. This could have both increased energy and financial cost implications from the additional requirement to desalinate water supplies.

Refer to the Waste Management section for a discussion of the impacts associate with sewage treatment and thus associated water quality issues.

#### **Mitigation**

An appropriate waste & wastewater system should be included as an integral part of the terminal design. The design should also include the re-issue of wastewater wherever possible. Other relevant mitigation measures are suggested under Ecology above.

#### **Residual Impacts**

The development is expected to result in a reduction or total cessation of the direct release of effluent which currently occurs at the terminal.

## **5. Noise and Air Quality**

#### **Demolition and Construction**

Demolition and construction activities and associated traffic are likely to result in increased noise levels during working hours.

Air quality could be affected primarily by the mobilisation of dust during demolition and construction phases of the development. The significance of this will depend on the time of year these activities are carried out and the location the dust is taken to by prevailing winds.

#### **Operation**

Noise levels resulting for increased number of passenger passing thought the terminal may be realised under Phase I of the development plan. It can be expected that these will be increased further as a result of Phases II and III of the development. There are only a small number of residential properties in the vicinity of the terminal that might be impacted be increased noise levels however this may change over the development period of the Master Plan.

Increased noise disturbance resulting from the operation on the redeveloped terminal and associated developments under Phases II and III is likely to impact birds using the adjacent habitats, specifically the Blowing Point wetland.

#### **Mitigation**

Noise levels should be monitored during both the construction and operation phases. Should noise levels increase beyond acceptable levels or should local residents be negatively impacted by noise levels, mitigation measures should be identified to address the source of the noise.

If appropriate, work areas should be watered down periodically to minimise dust becoming airborne. However run-off from this activity needs to be adequately dealt with.

#### **Residual Impacts**

No significant residual impacts are expected, under any of the proposed phases of the Master Plan.

## **6. Landscape and Visual**

#### **Demolition and Construction**

Temporary visual impacts are likely to be realised during the construction on each of the proposed development Phases. These are unlikely to be significant as they will be short lived.

#### **Operation**

The proposed terminal development will significantly change the landscape character of the area. The development will not only be much larger and higher than the existing terminal, but it has been designed to provide passengers arriving with an impression of the Island that portrays its desire to cater for the high end tourism market.

#### **Mitigation**

Appropriate hoarding should be used during the construction of each of the development Phases presented within the Master Plan to minimise the visual impacts of the construction activities on terminal users.

As outlined within the Goals Workshop, the buildings exterior will be designed to be consistent with the architectural context of the Caribbean and respects the history and aspirations of Anguilla. Landscaping will also reflect the character of Anguilla and the Caribbean (e.g. through the use of native plant species etc).

#### **Residual Impacts**

With the mitigation proposed above, all development Phases will result in significantly change to the visual appearance of the terminal facility. The change in the character of the views presented to both arriving and departing passengers is considered to be positive overall.

## **7. Natural Hazards**

#### **Demolition and Construction**

No significant impacts in relation to natural hazards are likely to result from the demolition or construction of any of the proposed Mater Plan development.

The demolition and construction activities will result in increased emissions of green house gases (carbon dioxide, methane etc) which contribute to climate change though energy and transport requirements.

#### **Operation**

While Phase I of the development has been sensitively designed to withstand and not exacerbate storm surge impacts, Phases II and III will result in a significantly larger footprint for the site. This additional footprint may result in the deflection of storm waters to surrounding areas which would not currently be inundated. The significance of such an impact will vary depending on the extent of such deflection and the future land use in adjacent areas.

The operation of the terminal and associated developments will result in increased greenhouse gas emissions which contribute to climate change as a result of increased energy requirements and increased water treatment processes.

Impacts associated with the potential development of Blowing Point wetland as part of the Master Plan should be further investigated. If this proposal results in the removal of protective fringing reefs or mangrove habitats (to gain navigation access) this may lead to the effect of natural hazards being exacerbated at the site.

#### **Mitigation**

If possible, construction activities should be appropriately timed to avoid the hurricane season. This would remove any potential risk of construction materials being distributed by high winds and



causing death or damage to people or properties. Should it not be possible to avoid the hurricane season, the construction site should be secured to reduce any such risks.

The development will be built to cope with hurricane strength winds and storm surges. The development should also be designed to ensure that in the event of a natural hazard occurring, the terminal buildings do not result in the impacts being exacerbated – for instance by deflecting storm surges to areas previously unlikely to have been affected by such events.

Every attempt should be made wherever possible to minimise greenhouse gas emissions during construction and operation of the development. Renewable energy sources should be promoted and integrated into detailed scheme design.

Should the Blowing Point wetland be developed all construction and operation activities should be sensitively designed to avoid exacerbating potential risks as outlined above.

#### **Residual Impacts**

Some greenhouse gas emissions resulting from the construction and operation are likely to remain post any mitigation measures being carried out.

No other significant residual impacts are expected under Phases I to III.

## **8. Waste Management**

### **Demolition and Construction**

A significant amount of waste materials will be generated by the demolition of the existing terminal buildings.

#### **Operation**

The quantity of sewage (and other wastewater) generated will also increase significantly following the completion of each phase of the development. As noted above, sewage is currently handled in a three part septic system with 2 holding tanks and a filtration bed that is open on the bottom to allow for effluent to seep into the ground.

#### **Mitigation**

Secondary wastewater treatment will be provided as part of the development. Therefore the proposed development will mean that effluent will no longer be released to adjacent coastal waters.

The Goals Workshop identified a need for the development to promote recycling of waste. It is therefore assumed that all

appropriate technologies and mitigation measures are put in place as part of the development.

#### **Residual Impacts**

No significant residual impacts are expected, under any of the proposed phases of the Master Plan.

## **9. Material Use and Energy**

### **Demolition and Construction**

The construction of the full Development Programme will require the majority of the construction materials to be imported to the Island. The mining and transport of these materials will carry their own environment impacts (e.g. direct loss of habitats at mining site, energy use etc). It is not known whether the proposed development might result in any significantly change in the current level of extraction from these off-island mining sites and thus additional environmental impacts.

#### **Operation**

If the fuel tanks are relocated as part of the proposed development, there is likely to be a reduction in risks associated with the transfer of this fuel.

Increased energy requirements and increased water treatment processes required for the operation of the proposed development will result in increased greenhouse gas emissions which contribute to climate change.

As it is known that sea turtles do not use the area of nesting, light disturbance is not expected to be a cause of concern.

#### **Mitigation**

The Goals Workshop set out a requirement that the development promotes efficient energy usage and minimizes the use of fossil fuels for energy production. It is therefore assumed that all appropriate technologies and mitigation measures are put in place as part of the development design.

#### **Residual Impacts**

Materials use may be fairly significant given the scale of the development and the requirement to import these materials. No mitigation measures have been identified to remove potential indirect impacts associated with this.

No other significant residual impacts are expected, under any of the development phases proposed.

## **10. Cultural Heritage**

### **Demolition and Construction**

Given the fact that the areas adjacent to the terminal is known to contain archaeological remains, there is the potential that construction activities under the expansion plans of Phases II to III could impact on and possibly destroy remains at this site before they could be catalogued. The significance of this occurring is unknown at present.

The potential for this impact to be realised would be increased if development of Blowing Point wetland were to be carried out, due to its close proximity to a known site of importance.

#### **Operation**

No significant direct or indirect impacts are likely to result from any of the proposed development Phases.

#### **Mitigation**

If possible, an assessment of the known site should be made and artefacts catalogued and removed as appropriate.

All construction activities in or around this location should then be monitored by an archaeologist to ensure that any further locations of importance are noted and artefacts preserved as appropriate.

It may be possible to retain any artefacts found in situ as part of the design of the scheme to form an educational resource for residents and tourists alike.

#### **Residual Impacts**

Residual impacts are not expected to be significant if a detailed assessment is completed before construction begins.

## **E. Initial Social Impact Assessment**

### **1. Land Use and Land Ownership**

#### **Demolition, Construction and Operation**

Following the Goals Workshop it was felt that sufficient land should be purchased to ensure a stable long-term development of the Blowing Point Port and to encourage private sector involvement in the development of various direct and indirect Port related services.





Therefore, it is likely that positive impacts will result from the purchase of these lands with the opportunity arising for private enterprise, which would not otherwise be made available to the local population. This may however have the knock on impact of increasing the property prices around the terminal, which in turn could have a negative impact on the resident populations' ability to purchase properties in this area.

The existing business operating at the Port will have to be closed or moved. This is likely to create a significant negative impact for the business owners in the short term however if appropriately compensated (either financially or through the provision of alternative premises) this impact may in fact be negated.

As is it assumed that the terminal development will not in itself result in an increase in visitors to the island it is unlikely that there will be any long term increase in tourism revenues island wide nor additional opportunities for locals to become involved in industry. However, if the above assumption is incorrect the development of the Development Programme may facilitate the realisation of increased off-site revenues and opportunities.

Phase III has the potential to also provide additional benefits for both local residents and visitors as it provides for recreational space as part of the Phase. The specific form of this recreation development is unknown at present however it is assumed to represent a benefit of the development.

### **Mitigation**

No specific mitigation measure have been identified however it is important to note that a number of enhancement measures should be implemented to maximise the benefits of the development over all phases of the Master Plan. These could include:

- Sensitive design of all elements of each phase of development to reflect local community preferences and changes in these over time.
- Community consultation may be appropriate at certain points within the implementation and development of the Master Plan to facilitate community involvement in future phases of the development, for instance in developing ideas on the best use of the area allocated for recreational use.
- Ensure adequate compensation or alternative arrangements are made for the business currently located at the Port.
- Ensure that opportunities are offered to the resident population to run concessions within the new terminal and in associated developments.

### **Residual Impacts**

Residual impacts are expected to be positive; with increased benefits arising as the different development phases are completed.

## **2. Community Change**

It is understood that in recent times it has been difficult to source a local labour force to work on the large number of developments underway on Anguilla. Given the low levels of unemployment on the Island and these recent difficulties, it is likely that the labour force employed in the construction phases at Blowing Point will not be made up of resident populations of the Lesser Antilles, or in fact the Caribbean. Issues that may arise from the influx of non-Caribbean workers might be associated with social disturbance and disruption to local community structure.

If this terminal development fulfils the Governments desire for it to become, in time, an economic hub on the Island it is likely to significantly change the structure of the community at Blowing Point. As Blowing Point is said to be a close nit community with a strong heritage in fishing, the proposed developments (most notably Phases II and II) of new and significant commercial properties could dramatically change this with the potential for more affluent newcomers to settle at Blowing Point. As noted above, properties prices in and around Blowing Point are likely to increase as a result of these developments.

### **Mitigation**

It is necessary to ensure the following measures are carried out to reduce the potential for any negative community impact occurring:

- provision of adequate housing and healthcare for construction workers;
- consultation with local community leaders and residents to minimise the potential for adverse impacts to local residents from the influx of migrant workers;
- Monitoring of community concerns throughout the construction and operation phases of the development.

The proposed developments may also provide significant social benefits. Enhancement could be carried out to ensure these are maximised:

- Ensure the design is sensitive carried out to reflect local community preferences using local consultations where appropriate;

- Local labour should be maximised wherever possible and training provided as appropriate to ensure that a skills are retained amongst the local workforce.

### **Residual Impacts**

These are difficult to predict at this stage. The situations should be closely monitored and issues addressed as appropriate.

### **Personal Communications:**

Damien Hughes - Director of the Anguilla National Trust  
Elizabeth Klute - Director of Disaster Management  
James Gums - Director of Fisheries and Marine Resources  
Karim Hodge - Director of Environment  
Maureen Richardson -Water Laboratory





# VI. FINANCIAL & ECONOMIC ASSESSMENT

## A. Financial Analysis

### 1. Current Financial Performance

#### Introduction

There are no independent financial accounts for Port operations at Blowing Point. The following were therefore used as the basis for estimating the current financial situation at the Port:

- The Government Estimates 2007 provide:
  - Revenue from all the potential sources of income associated with the Port at Blowing Point; and
  - Port and airport employee numbers, salaries and recurrent expenditure.
- Current tax rates for the potential revenue items were requested from the Ministry of Finance.
- During our fieldwork, estimates were obtained of numbers of personnel currently employed at the Port, numbers of ferries using Blowing Point etc.

The Halcrow Report of August 2002 provides cash flow estimates for all ports in Anguilla for 1997 to 2001. This shows that the ports have a substantial surplus. However, the analysis relates almost exclusively to cargo operations, which have now been removed from Blowing Point so making these cash flow estimates irrelevant to the current project.

### 2. Potential Revenue by Source

Potential revenue which could be considered, at least in principle, be attributed to Blowing Point is shown in Exhibit VI-1. The total is around EC\$30 million out of a national total of EC\$175 million. EC\$19 million is accounted for by accommodation tax and the tourism marketing levy, which are used in the economic, rather than the financial, analysis. The next highest category is embarkation tax, at EC\$4.8 million.

In 2007 some 226,000 people embarked on ferries from Blowing Point. The tax per person was EC\$13.5, giving a revenue of around EC\$3 million. This compares with the total for ports and the airport of EC\$4.8 million in Exhibit VI-1, suggesting EC\$1.8 million derives from the airport, which seems reasonable.

**Exhibit VI-1. Maritime - related Revenues from Government Estimates (EC\$ '000)**

	Actual 2005	Approved 2006	Estimate 2007
<b>Total revenue</b>	<b>125,643</b>	<b>800</b>	<b>174,981</b>
Embarkation tax			4,800
Accommodation tax	13,292	17,000	17,000
Tourism marketing levy	0	1,600	1,600
Boat and permits	27	35	25
Mooring permits	12	10	75
Cruise permits	249	319	400
Ticket tax			1,600
Pier dues	877	1,740	2,000
Tonnage dues	465	794	1,400
Port dues	283	377	650
Cargo handling charges	16	110	40
<b>Total</b>			<b>29,590</b>

Ferry owners are understood to pay EC\$5,000 per year in licence fees. We have estimated that there are 15 large ferries (80-135 seat capacity) and 20-30 charter vessels serving Blowing Point. If only the large ferries pay the licence fee, this gives annual revenue of EC\$75,000, which is more than in the Government Estimates. In the absence of more detailed information, we have taken this as the potential revenue from Blowing Point. It is a small figure in the analysis and therefore an error is unlikely to affect the result.

We have assumed that mooring permits, cruise permits and ticket tax are not relevant to Blowing Point. Port dues will only be included if the proposed legislation requested from Anguilla raises tax on Anguilla-registered ferries, which are currently exempt. The other revenue items from are cargo-related and again not relevant to Blowing Point.

### 3. Port employees and salaries

Numbers of personnel employed at Blowing Point, based on our fieldwork, are shown in Exhibit VI- 2.

Only 27 out of 183 are directly concerned with port operation. It is difficult to reconcile these numbers with those for airports and ports in the Government Estimates, as the majority in the Estimates are airport employees or involved in port cargo operations. Taking typical salary levels from the Estimates, our estimated salary cost for the 27 Blowing Port port-related employees is EC\$500,000. We have assumed that car park

operators might be paid around EC\$100,000 per year, giving a combined total of EC\$600,000.

**Exhibit VI-2. Personnel Employed at Blowing Point**

	2007 Personnel
<b>Port</b>	
Port management	6
Port security	21
<b>Other</b>	
Police	6
Customs	18
Immigration	10
Departure tax collectors	3
Taxi despatchers	3
Vessel agents	6
Charter boat agents	6
Porters	4
Vessel crew/captains	100
<b>Total</b>	<b>183</b>

### 4. Income from other sources

Existing facilities that could provide income for the Port at Blowing Point are:

- Port dues
- Fuel supply to ferries
- Water supply to ferries
- Maintenance mooring
- Vehicle parking

There is potential for ferries to be charged some form of port dues to cover the costs of constructing and operating the new harbour facilities. However, this is really an issue to be addressed when the new port authority is implemented and has not been taken further here.

It has already been agreed in principle that Blowing Point should be able to charge a fee for providing fuel, water and maintenance services to ferries and other craft. Levies on fuel and water of 2% have been mentioned.





The FIRR is around the threshold rate of return under the most pessimistic scenario, the Low Case, demonstrating that charging structures will need to be carefully considered when the project reaches implementation.

**Exhibit VI-4. Phase II Development Plan Financial Analysis Base Case-A**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Gross revenue</b>																					
Boat licences	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06
Departure tax	1.13	1.24	1.34	1.44	1.53	1.62	1.71	1.80	1.86	1.92	1.99	2.04	2.09	2.12	2.15	2.18	2.22	2.25	2.28	2.32	2.35
Office rentals						0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Food/beverage concessions						0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
Duty free concessions						0.19	0.21	0.22	0.22	0.23	0.24	0.24	0.25	0.25	0.26	0.26	0.27	0.27	0.27	0.28	0.28
Retail concessions						0.06	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Parking	0.14	0.16	0.17	0.18	0.19	0.41	0.44	0.46	0.47	0.49	0.51	0.52	0.53	0.54	0.55	0.56	0.56	0.57	0.58	0.59	0.60
<b>Boat fees</b>																					
Fuel supply	0.07	0.08	0.08	0.09	0.10	0.10	0.11	0.11	0.12	0.12	0.12	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.15	0.15
Water supply	0.004	0.004	0.004	0.005	0.005	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Maintenance mooring	0.11	0.12	0.13	0.14	0.14	0.31	0.32	0.34	0.35	0.36	0.38	0.38	0.39	0.40	0.41	0.41	0.42	0.42	0.43	0.44	0.44
<b>Total</b>	<b>1.48</b>	<b>1.62</b>	<b>1.76</b>	<b>1.89</b>	<b>2.01</b>	<b>2.92</b>	<b>3.07</b>	<b>3.23</b>	<b>3.33</b>	<b>3.44</b>	<b>3.55</b>	<b>3.63</b>	<b>3.71</b>	<b>3.77</b>	<b>3.82</b>	<b>3.88</b>	<b>3.94</b>	<b>3.99</b>	<b>4.05</b>	<b>4.11</b>	<b>4.17</b>
<b>Costs</b>																					
Construction <sup>1</sup>			8.90	8.90																	
O&M cost harbour	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Salary cost terminal	0.60	0.60	0.60	0.60	0.60	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
O&M cost terminal						0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Land rental						0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
<b>Total</b>				<b>8.90</b>	<b>0.00</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>
<b>Net revenue</b>	<b>1.48</b>	<b>1.62</b>	<b>1.76</b>	<b>-7.01</b>	<b>2.01</b>	<b>1.11</b>	<b>1.27</b>	<b>1.42</b>	<b>1.52</b>	<b>1.63</b>	<b>1.74</b>	<b>1.82</b>	<b>1.91</b>	<b>1.96</b>	<b>2.01</b>	<b>2.07</b>	<b>2.13</b>	<b>2.18</b>	<b>2.24</b>	<b>2.30</b>	<b>2.36</b>
<b>FIRR</b>	<b>23%</b>																				
<b>Discount factor</b>	<b>1</b>	<b>0.940</b>	<b>0.884</b>	<b>0.831</b>	<b>0.781</b>	<b>0.734</b>	<b>0.690</b>	<b>0.648</b>	<b>0.610</b>	<b>0.573</b>	<b>0.539</b>	<b>0.506</b>	<b>0.476</b>	<b>0.447</b>	<b>0.421</b>	<b>0.395</b>	<b>0.372</b>	<b>0.349</b>	<b>0.328</b>	<b>0.309</b>	<b>0.290</b>
<b>Discounted net revenue</b>				<b>-5.83</b>	<b>1.57</b>	<b>0.81</b>	<b>0.87</b>	<b>0.92</b>	<b>0.93</b>	<b>0.93</b>	<b>0.94</b>	<b>0.92</b>	<b>0.91</b>	<b>0.88</b>	<b>0.85</b>	<b>0.82</b>	<b>0.79</b>	<b>0.76</b>	<b>0.74</b>	<b>0.71</b>	<b>0.69</b>
<b>NPV (US\$ million)</b>	<b>9.20</b>																				

Note 1 Cost includes design, construction supervision & construction works



Exhibit VI-5. Phase IIIb Development Plan Financial Analysis Base Case-A

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Gross revenue</b>																					
Boat licences	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06
Departure tax	1.13	1.24	1.34	1.44	1.53	1.62	1.71	1.80	1.86	1.92	1.99	2.04	2.09	2.12	2.15	2.18	2.22	2.25	2.28	2.32	2.35
Office rentals						0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Food/beverage concessions						0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
Duty free concessions						0.19	0.21	0.22	0.22	0.23	0.24	0.24	0.25	0.25	0.26	0.26	0.27	0.27	0.27	0.28	0.28
Retail concessions						0.06	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Parking	0.14	0.16	0.17	0.18	0.19	0.41	0.44	0.46	0.47	0.49	0.51	0.52	0.53	0.54	0.55	0.56	0.56	0.57	0.58	0.59	0.60
<b>Boat fees</b>																					
Fuel supply	0.07	0.08	0.08	0.09	0.10	0.10	0.11	0.11	0.12	0.12	0.12	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.15	0.15
Water supply	0.004	0.004	0.004	0.005	0.005	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Maintenance mooring	0.11	0.12	0.13	0.14	0.14	0.31	0.32	0.34	0.35	0.36	0.38	0.38	0.39	0.40	0.41	0.41	0.42	0.42	0.43	0.44	0.44
<b>Total</b>	<b>1.48</b>	<b>1.62</b>	<b>1.76</b>	<b>1.89</b>	<b>2.01</b>	<b>2.92</b>	<b>3.07</b>	<b>3.23</b>	<b>3.33</b>	<b>3.44</b>	<b>3.55</b>	<b>3.63</b>	<b>3.71</b>	<b>3.77</b>	<b>3.82</b>	<b>3.88</b>	<b>3.94</b>	<b>3.99</b>	<b>4.05</b>	<b>4.11</b>	<b>4.17</b>
<b>Costs</b>																					
Construction <sup>1</sup>			8.90	8.90					4.16												
O&M cost harbour	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Salary cost terminal	0.60	0.60	0.60	0.60	0.60	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
O&M cost terminal						0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Land rental						0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
<b>Total</b>				<b>8.90</b>	<b>0.00</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>5.97</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>	<b>1.81</b>
<b>Net revenue</b>	<b>1.48</b>	<b>1.62</b>	<b>1.76</b>	<b>-7.01</b>	<b>2.01</b>	<b>1.11</b>	<b>1.27</b>	<b>1.42</b>	<b>-2.64</b>	<b>1.63</b>	<b>1.74</b>	<b>1.82</b>	<b>1.91</b>	<b>1.96</b>	<b>2.01</b>	<b>2.07</b>	<b>2.13</b>	<b>2.18</b>	<b>2.24</b>	<b>2.30</b>	<b>2.36</b>
<b>FIRR</b>	<b>18%</b>																				
<b>Discount factor</b>	<b>1</b>	<b>0.940</b>	<b>0.884</b>	<b>0.831</b>	<b>0.781</b>	<b>0.734</b>	<b>0.690</b>	<b>0.648</b>	<b>0.610</b>	<b>0.573</b>	<b>0.539</b>	<b>0.506</b>	<b>0.476</b>	<b>0.447</b>	<b>0.421</b>	<b>0.395</b>	<b>0.372</b>	<b>0.349</b>	<b>0.328</b>	<b>0.309</b>	<b>0.290</b>
<b>Discounted net revenue</b>				<b>-5.83</b>	<b>1.57</b>	<b>0.81</b>	<b>0.87</b>	<b>0.92</b>	<b>-1.61</b>	<b>0.93</b>	<b>0.94</b>	<b>0.92</b>	<b>0.91</b>	<b>0.88</b>	<b>0.85</b>	<b>0.82</b>	<b>0.79</b>	<b>0.76</b>	<b>0.74</b>	<b>0.71</b>	<b>0.69</b>
<b>NPV (US\$ million)</b>	<b>6.66</b>																				

Note 1 Cost includes design, construction supervision & construction works



Exhibit VI-6. Phase IIIa Development Plan Financial Analysis Base Case-A

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Gross revenue</b>																					
Boat licences	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06
Departure tax	1.13	1.24	1.34	1.44	1.53	1.62	1.71	1.80	1.86	1.92	1.99	2.04	2.09	2.12	2.15	2.18	2.22	2.25	2.28	2.32	2.35
Office rentals						0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Food/beverage concessions						0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
Duty free concessions						0.19	0.21	0.22	0.22	0.23	0.24	0.24	0.25	0.25	0.26	0.26	0.27	0.27	0.27	0.28	0.28
Retail concessions						0.06	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Parking	0.14	0.16	0.17	0.18	0.19	0.41	0.44	0.46	0.47	0.49	0.51	0.52	0.53	0.54	0.55	0.56	0.56	0.57	0.58	0.59	0.60
<b>Boat fees</b>																					
Fuel supply	0.07	0.08	0.08	0.09	0.10	0.10	0.11	0.11	0.12	0.12	0.12	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.15	0.15
Water supply	0.004	0.004	0.004	0.005	0.005	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Maintenance mooring	0.11	0.12	0.13	0.14	0.14	0.31	0.32	0.34	0.35	0.36	0.38	0.38	0.39	0.40	0.41	0.41	0.42	0.42	0.43	0.44	0.44
<b>Total</b>	<b>1.48</b>	<b>1.62</b>	<b>1.76</b>	<b>1.89</b>	<b>2.01</b>	<b>2.92</b>	<b>3.07</b>	<b>3.23</b>	<b>3.33</b>	<b>3.44</b>	<b>3.55</b>	<b>3.63</b>	<b>3.71</b>	<b>3.77</b>	<b>3.82</b>	<b>3.88</b>	<b>3.94</b>	<b>3.99</b>	<b>4.05</b>	<b>4.11</b>	<b>4.17</b>
<b>Costs</b>																					
Construction <sup>1</sup>			8.19	8.19					14.85												
O&M cost harbour	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Salary cost terminal	0.60	0.60	0.60	0.60	0.60	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
O&M cost terminal						0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
Land rental						0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
<b>Total</b>				<b>8.19</b>	<b>0.00</b>	<b>1.77</b>	<b>1.77</b>	<b>1.77</b>	<b>16.62</b>	<b>1.77</b>	<b>1.77</b>	<b>1.77</b>	<b>1.77</b>	<b>1.77</b>	<b>1.77</b>	<b>1.77</b>	<b>1.77</b>	<b>1.77</b>	<b>1.77</b>	<b>1.77</b>	<b>1.77</b>
<b>Net revenue</b>	<b>1.48</b>	<b>1.62</b>	<b>1.76</b>	<b>-6.30</b>	<b>2.01</b>	<b>1.14</b>	<b>1.30</b>	<b>1.45</b>	<b>-13.29</b>	<b>1.66</b>	<b>1.77</b>	<b>1.86</b>	<b>1.94</b>	<b>2.00</b>	<b>2.05</b>	<b>2.11</b>	<b>2.16</b>	<b>2.22</b>	<b>2.28</b>	<b>2.34</b>	<b>2.40</b>
<b>FIRR</b>	<b>8%</b>																				
<b>Discount factor</b>	<b>1</b>	<b>0.940</b>	<b>0.884</b>	<b>0.831</b>	<b>0.781</b>	<b>0.734</b>	<b>0.690</b>	<b>0.648</b>	<b>0.610</b>	<b>0.573</b>	<b>0.539</b>	<b>0.506</b>	<b>0.476</b>	<b>0.447</b>	<b>0.421</b>	<b>0.395</b>	<b>0.372</b>	<b>0.349</b>	<b>0.328</b>	<b>0.309</b>	<b>0.290</b>
<b>Discounted net revenue</b>				<b>-5.23</b>	<b>1.57</b>	<b>0.84</b>	<b>0.90</b>	<b>0.94</b>	<b>-8.10</b>	<b>0.95</b>	<b>0.96</b>	<b>0.94</b>	<b>0.92</b>	<b>0.89</b>	<b>0.86</b>	<b>0.83</b>	<b>0.80</b>	<b>0.78</b>	<b>0.75</b>	<b>0.72</b>	<b>0.70</b>
<b>NPV (US\$ million)</b>	<b>1.02</b>																				

Note 1 Cost includes design, construction supervision & construction works



## B. Economic Assessment

The economic analysis is based on comparison of “with project” and “without project” forecasts. The “without project” case is constrained by the capacity of the existing terminal, which it was assumed would be reach capacity by 2010, after which there would be no further growth.

The benefits have been calculated as the difference between the economic value from users of Blowing Point with the new terminal and without it, in the categories shown below.

### Benefits

- Customs duties
- Excursionist spend
- Tourist levy
- Accommodation tax

### Costs

- Construction
- Operating
- Maintenance
- Rehabilitation

The principle of targeting these particular categories of benefit is that these are the major shortfalls that the Anguillan economy would experience if the new terminal were not developed.

Since there is full employment on the island, it is inappropriate to use shadow wage rates in the analysis. There is little or no poverty in Anguilla; therefore there will be little or no impact on poverty reduction. We were unable to identify any unmitigated negative economic consequences to include in the analysis.

A discount rate of 6% has been used to calculate the net present value (NPV).

As regards Customs duties, 10% of Customs revenue is estimated to come through Blowing Point, amounting to EC\$25,000 – 30,000 daily. Customs’ enforcement capabilities are currently compromised by a lack of facilities, such that they cannot carry out full inspections. Customs estimate that, if full checks could be carried out, their revenue would increase by 50%.

The Tourism Marketing Levy was implemented in 2007 at a rate of US\$1.00 per day from each room occupied by visitors (tourists). Accommodation tax is 10% on hotel bills.

It is estimated that on average a tourist pays EC\$22 per visit for the marketing levy and EC\$233 in accommodation tax.

The costs used in the economic analysis were the same as in the financial analysis. It was assumed that, at the level of accuracy used in the estimates, it was not realistic to separate out the tax component.

Exhibit VI-7 shows that in the Base Case-A for Phase I Development Plan, the EIRR of 29%, the project is viable.

The EIRR is still well above the threshold rate of return even under the most pessimistic scenario, the Low Case. The main reason for this high EIRR is the rapid growth forecast in tourist numbers and hence the substantial loss to the Government in tourist revenue if the terminal capacity is not increased.

The true economic value of the land utilised for terminal construction is difficult to determine. A value of zero has been used but sensitivity testing shows the EIRR is not hugely sensitive to this parameter.

The FIRR for Part I Development Plan is 28%, the FIRR for Part II Development Plan is 23%, the FIRR for Part III-b is 18% and the FIRR for Part III-a (most expensive alternative) is 8%. Given that the EIRR follows closely the FIRR we can presume that depending on the development alternative selected the EIRR would range from 29%, the least investment to about 6% for the most expensive investment. Therefore could conclude that the economic benefits of the most expensive development plan Phase III-a has marginal economic benefit whereas Phase III-b development plan would have an EIRR of about 16%, providing a good economic benefit.

Therefore the financial and economic analysis are supportive of developing the Terminal building as designed and providing up to 650 ground level parking positions. The parking structure alternative is marginally viable and at this time we would not recommend its implementation.





**Exhibit VI-7. Economic Benefits and Costs Base Case Part I Development Plan (US\$ millions)**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Passengers unable to visit without new terminal</b>																					
Excursionists					2,093	4,248	6,468	8,755	11,110	13,536	16,035	18,609	21,260	23,990	26,802	29,699	32,683	35,756	38,921	42,181	45,540
Tourists					11,203	22,705	34,311	45,801	52,759	60,065	67,736	72,569	77,547	79,256	80,982	82,726	84,487	86,265	88,061	89,876	91,708
Residents					4,981	9,729	14,205	18,366	20,986	23,654	26,370	28,634	30,931	32,745	34,579	36,436	38,313	40,213	42,135	44,080	46,047
<b>Total</b>					18,277	36,682	54,984	72,923	84,856	97,255	110,142	119,812	129,738	135,991	142,364	148,860	155,483	162,234	169,118	176,137	183,294
<b>Gross benefits</b>																					
Customs duties						1.00	1.03	1.06	1.08	1.10	1.12	1.14	1.16	1.17	1.19	1.20	1.21	1.23	1.24	1.26	1.27
Excursionist spend						0.09	0.14	0.19	0.25	0.30	0.36	0.41	0.47	0.53	0.60	0.66	0.73	0.79	0.86	0.94	1.01
Tourist levy						0.50	0.75	1.00	1.16	1.32	1.49	1.59	1.70	1.74	1.78	1.81	1.85	1.89	1.93	1.97	2.01
Accommodation tax						2.27	3.31	4.28	4.89	5.51	6.14	6.67	7.21	7.63	8.06	8.49	8.93	9.37	9.82	10.27	10.73
<b>Total</b>						3.86	5.24	6.54	7.38	8.23	9.11	9.82	10.54	11.07	11.61	12.16	12.72	13.28	13.85	14.43	15.02
<b>Costs</b>																					
Construction				7.74	7.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O&M cost harbour						0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Salary cost terminal						1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
O&M cost terminal						0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Land																					
<b>Total</b>				7.74	7.74	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07	2.07
<b>Net benefits</b>				-7.74	-7.74	1.79	3.16	4.47	5.30	6.16	7.04	7.74	8.46	9.00	9.54	10.09	10.64	11.21	11.78	12.36	12.95
<b>EIRR</b>	28%																				
<b>Discount factor</b>	1	0.940	0.884	0.831	0.781	0.734	0.690	0.648	0.610	0.573	0.539	0.506	0.476	0.447	0.421	0.395	0.372	0.349	0.328	0.309	0.290
<b>Discounted net revenue</b>				-6.43	-6.04	1.31	2.18	2.90	3.23	3.53	3.79	3.92	4.03	4.03	4.01	3.99	3.96	3.91	3.87	3.81	3.76
<b>NPV (US\$ million)</b>	43.75																				



# VII. PROJECT MANAGEMENT

## A. Design Strategy & Standards

### Zoning & Planning Requirements

The National Land Use Plan sets the beaches as public domain. The setback requirement from beach high water mark is 30 metres. The side property line setback is 2 metres and the front and back setback is 5 metres. The nature of any new building for this facility is a special condition structure that needs to have a separated seaside and landside control. The Director of Physical Planning did not see any objections to the notion of constructing the new Terminal over the water's edge.

The recently completed jetty works reclaimed land from the sea to allow the construction of the boardwalk. Major road widths are required to be between 7.5 to 9 metres. Minor roads should be a minimum of 6 metres.

### Construction Materials

Most construction material is imported. Cement, aggregates, and steel are brought in from neighbouring islands such as Puerto Rico. Local practice is for buildings to be constructed of reinforced concrete or block. Corrugated galvanised sheet roofs are used but considered flimsy and unable to withstand the force of a hurricane. Windows tend to be small, with limited glass surface. Metal tracks are installed on the exterior of the windows as hurricane shutters.

### Hurricane Loading

A report prepared by GeoSy Ltd in 2005 identifies hurricanes as a frequent and severe hazard for Anguilla. Severe damage was experienced from Hurricane Donna in 1960 as it passed directly over the island. The devastation from Donna ultimately led to a change in the type and style of building construction. The Geosy Ltd study extrapolated that Anguilla can expect Category 3 or higher hurricanes in 20-year cycles. A Category 3 hurricane can generate storm surges of 1.5 to 3 meters as well as wave heights in the 5 to 8 meter range.

Government requires that the Terminal design satisfy Category IV hurricane conditions.

### Earthquake Zones

The seismic hazard map, Exhibit VII-1, refers to the design ground velocity for seismic activity for the area of Anguilla and

the surrounding islands. Buildings and structures are to be designed to withstand these seismic levels of activity.

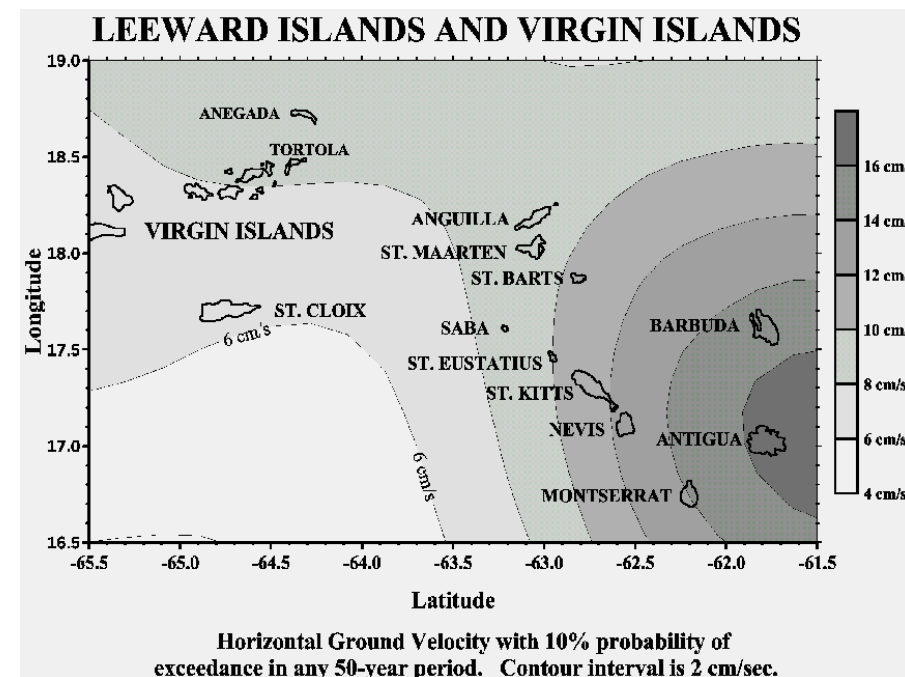


Exhibit VII-1.

### Technical Design Standards

Designs will be based on the standards the Consultant specifies, with a caveat for accepting equivalent or better alternative standards.

The design will generally make use of Canadian and British Standards as the Caribbean in general are influenced by their traditional business partners, Britain, United States and Canada. However, many of the standards are similar and overlap. In fact, many Canadian standards were adopted from British standards. Ultimately design standards are specified with the intent of constructing an edifice that is safe, sound and attractive, and is based on high quality construction that will last for many years without significant deterioration.

## B. Financial Strategy

### 1. Sources of Financing

From experience elsewhere, infrastructure investments or lending opportunities are attractive to a number of parties:

- Pension funds, including public service pension funds.** This approach would clearly need to have the Port Authority in place first. Authorities tend to be more stable than many other elements of the economy and are particularly well suited to servicing debt that is focused on long term, lower risk consistent yields. However, the transition to Authority status creates uncertainty and the optimum strategy for a lending approach appears to be to leave financial issues in the hands of the government until the Authority legislation is in place, the Authority established and the staff transitioned. Even if the Government lends working capital to the Authority for the first year of operation and it is re-financed by private pension fund lending, having a year of stable accounts reduces risks to the lenders and provides a clear picture of the way forward;
- Commercial Bank lending.** Commercial lending to the Government from chartered banks could be assigned to the Authority if it is formed and re-financed. Sovereign guarantees may be required for a limited period, until the Authority demonstrates its viability.
- BOT Operators.** There are several infrastructure funds that are willing to construct and operate port and airport assets. The Blowing Point terminal would be too small a project to interest these funds, but the complete Port Authority, including the new investments at Corito, may be sufficiently large to attract interest. The BOT option is a public policy decision because it does mean private operation for 20-30 years. To the extent that the Government appears to be heading to an Authority model, the BOT option may be ruled out.



## 2. Revenue Optimization

There are two elements to revenue optimization:

- Rents Fees and charges should relate directly to the services and facilities provided and should provide a target rate of return on the capital investment. If this is a significant change from current practice, there may need to be a transition period; and
- Commercial revenues, particularly car parking and terminal concessions, should be market priced and competitive with other venues on the island. The typical terminal concession pricing structure may be unique for the Island, in that the rents in terminals are typically based on percentage of gross sales and minimum guarantees. While this concept may be novel to local entrepreneurs, it has the advantage that the building shell is already financed by the Port, so the restaurant operator only has to build out the interior. The operator has a lower investment than in a stand alone building. Pricing concession rents is relatively easy in that it can be done as a competitive RFP process. Pricing parking at Blowing Point is more difficult. At most ports/airports parking charges are set similar to premium city centre locations, but there are no benchmarks for Blowing Point other than the rents charged by private operators on adjacent land.

## C. Execution Strategy & Plan

It is recommended that the construction of Phase-I of the Site Development Plan be tendered during the year 2008. Hence the detailed design of the new Terminal would need to be completed, approved and Tender Documents issued by October 2008.

Phase II Site Development Plan requires Government to purchase about 1.1 hectares of additional land and provides the opportunity to increase the number of parking positions from 36 to 250, a significant improvement to the current situation. We are of the opinion that these additional lands could not be purchased by Government in time for a construction start target of January 2009; however, we are of the opinion that sufficient land could possibly be purchase for Phase II by the year 2015. We therefore recommend that Government take the necessary steps to have the additional 1.1 hectares of land purchased or expropriated by legislation.

Although the purchase or expropriation of sufficient land for the ultimate Site Development Plan, Phase III, is highly unlikely it is recommended that Government take the necessary steps to legislate a regional Land Use Zoning for the Blowing Point Port and its environs. This approach would provide the necessary legal and economic framework to encourage private sector investors to satisfy the additional parking Port requirements and most importantly to provide the recommended residential, commercial, resort and recreational activities to take place, thereby providing a balanced growth centre for the area. We recommend that legislation be in place by the year 2015.

It is further recommended that Government prepare the necessary legislation to create a Seaport/Airport Authority that will encourage the commercial development and operations of the Port at Blowing Point. We recommend that legislation be in place by end of 2009.





## BIBLIOGRAPHY





## REFERENCES

Draft National Land Use Plan Anguilla, 1996 by the Department of Lands and Surveys, Planning Unit

Anguilla Port Development and Management Study November 2002, Halcrow Group Limited

Status of Hazard Maps Vulnerability Assessments and Digit Maps Anguilla report, The Caribbean Disaster Emergency Response Agency, October 2003

A Bill for Disaster Management Act 2007, Government of Anguilla

Study on Development of Duty Free Shopping Sector in Anguilla draft report July 2000

Audubon Watchlist. West Indian Whistling Duck. <http://www.audubon2.org/watchlist/viewSpecies.jsp?id=220>. Accessed 18/12/07

Australian Institute of Marine Science. Accessed 07/01/07. <http://www.aims.gov.au/pages/research/coral-bleaching/scr1998/scr-09.html>

Brooks, H.G., 2004. The Potential Impacts of Global Climate Change On Anguilla, British West Indies. Government of Anguilla Department of Physical Planning.

Bythell, J.C., Buchan, K.C. 1996. Impact of Hurricane Luis on the coastal and marine resources of Anguilla marine ecological survey. Report prepared for the British Development Division, Overseas Development Administration.

CDERA, 2003. The Caribbean Disaster Emergency Response Agency. Hurricane impact on beaches in the eastern Caribbean Islands 1989 – 1995. [www.unesco.org/csi/act/cosalc/hur9.htm](http://www.unesco.org/csi/act/cosalc/hur9.htm). Accessed 22/11/07

COSALC, 1997. Coast and Beach Stability in the Lesser Antilles project Sponsored by UNESCO and the University of Puerto Rico Sea Grant College Program : Brochure published by: Sea Grant Printers. <http://www.unesco.org/csi/act/cosalc/projec10.htm> Accessed 22/11/07.

Crock J G., and Petersen J B., 1999. A Long and Rich Cultural Heritage: The Anguilla Archaeology Project, 1992-1998. Report prepared for the Anguilla Archaeological and Historical Society, The Valley, Anguilla British West Indies, 1999.

Douglas, N. (ed). 1986. Anguilla Archaeological and Historical Society Review (AAHS), 1981-1985. The Valley, Anguilla, British West Indies.

Godley, B.J., Broderick, A.C., Campbell, L.M., Ranger, S. and Richardson, P.B. 2004. An assessment of the status and exploitation of marine turtles in the UK Overseas Territories in the Wider Caribbean. Final project report for the Department of Environment, Food and Rural Affairs and the Foreign and Commonwealth Office after Meylan, 1983.

Halcrow, 2004. Caribbean Development Bank, Government of Anguilla. Country Poverty Assessment: Anguilla. Draft Final Report. Volume 1 of 2: Main Report. December 2002

Harvard, accessed December 2007. [http://insectdatabases.oeb.harvard.edu/caribbean/Mantisweb/FMPro?-DB=Image.DRD&-Lay=web&-Format=images\\_DR.htm&Species\\_ID==1090473&-Find](http://insectdatabases.oeb.harvard.edu/caribbean/Mantisweb/FMPro?-DB=Image.DRD&-Lay=web&-Format=images_DR.htm&Species_ID==1090473&-Find)

IUCN, 2007. <http://www.iucn-isg.org/actionplan/ch2/lessertantillean.php>, accessed December 2007.

JNCC – Joint Nature Conservancy Council.

[http://www.jncc.gov.uk/pdf/OT\\_Anguilla.pdf](http://www.jncc.gov.uk/pdf/OT_Anguilla.pdf) - accessed 23/11/97

UK Overseas Territories Conservation Forum (UKOTCF), 2007.

<http://www.ukotcf.org/territories/anguilla.htm>

World Resource Institute). Accessed 2008-01-07.

<http://www.wri.org/publication/content/7872>

Young, Dr S, 2005. Hurricane Hazards in Anguilla. UK Department for International Development



