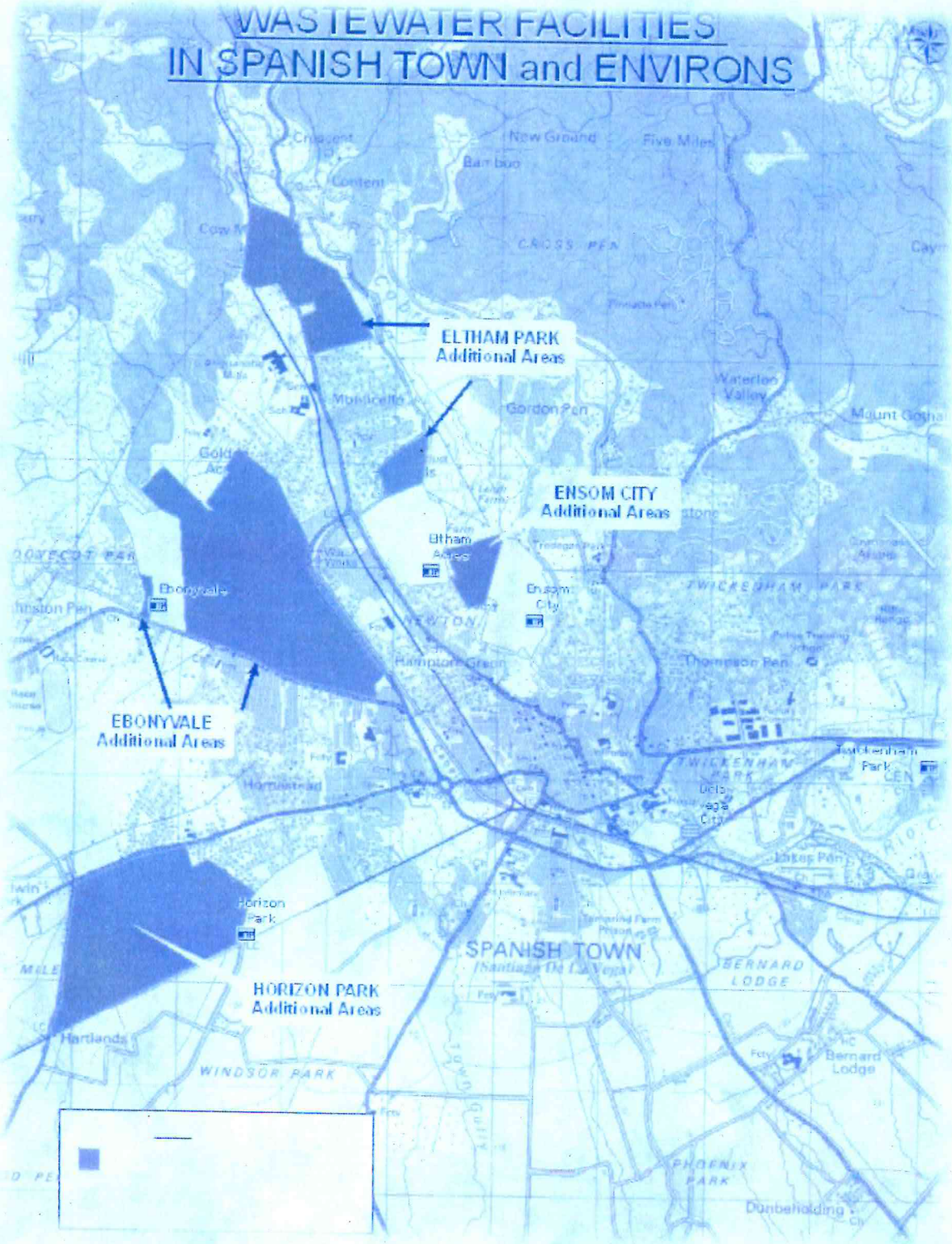
CENTRAL WASTEWATER TREATMENT COMPANY LIMITED



CENTRAL WASTEWATER TREATMENT COMPANY LIMITED

TARIFF APPLICATION SUBMISSION

TO THE

OFFICE OF UTILITIES REGULATION

FOR SEWERAGE TREATMENT

PROVIDED TO THE NATIONAL

WATER COMMISSION

2013/14 TO 2018/19

February 10, 2013

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PURPOSE OF APPLICATION

This submission is CWTC's Initial Application for a tariffs is in accordance with the Water Sector Policy of Jamaica, the Office of Utilities Regulation Act (OUR Act), and the Regulatory Framework established by the Office of Utilities Regulation (OUR).

With respect to tariffs, Section 3.3.2.5 of the Water Sector Policy states that:

"The OUR will be responsible for setting tariffs at a level which allows the service providers to fully recover efficient cost levels (including both capital and operating costs)."

It is expected that the tariff review arising from this application will result in the establishment of a clear framework which encourages efficiency and quality of service in the water sector with regards to sewerage by ensuring that CWTC operates in a viable and sustainable manner with appropriate incentives for system improvements.
The granting of the tariff and the additional measures achieve major comes including:

- A sustainable financial position for CWTC;
- An appropriate return on capital;
- Achievement of specific performance targets;
- Affordable sewerage charges.

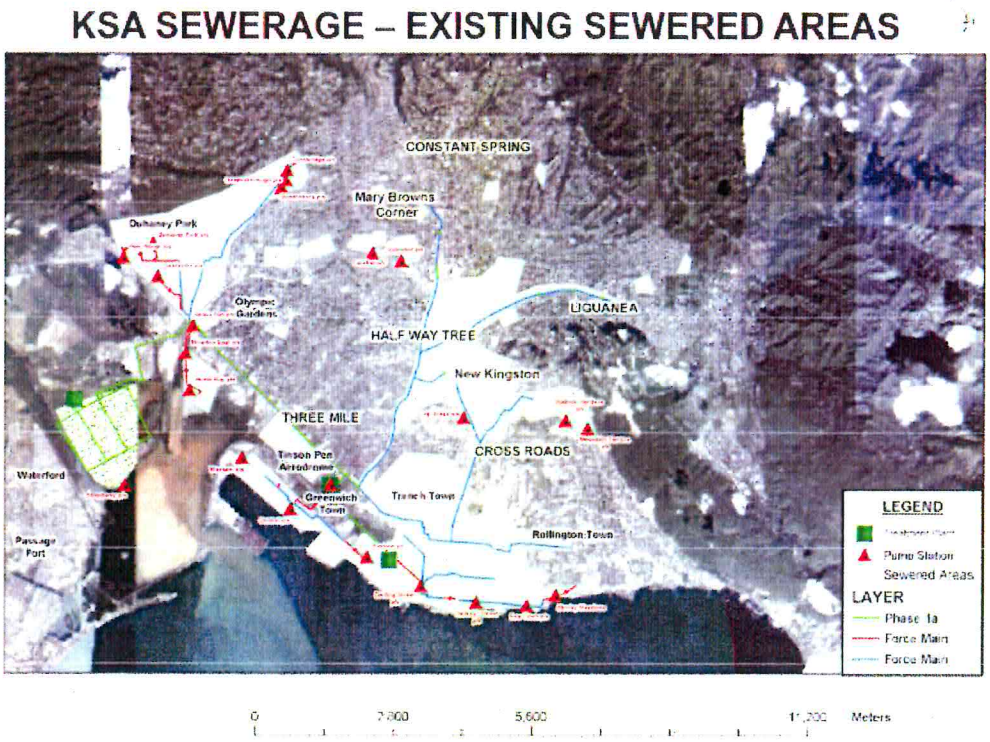
1 INTRODUCTION

Sanitation services is a Basic Human Need (BHN), normally pegged to the provision of potable water and is very necessary in protecting the environment and safeguarding the health of citizens via disease control. As revealed during the literature review process, many governments in the 1990s embarked on a variety of ambitious reforms of their respective urban Wastewater Systems (WSS) sector with varying degrees of success. According to Marin (2009), since 1990 more than 260 contracts have been awarded to private operators for the management of urban water and sanitation utilities in the developing world.

At the direction of the GOJ, under the pen of Cabinet approval, Jamaica's agency responsible for the WSS sector – the National Water Commission – entered into country's first PPP for the construction, operation and management of sewage treatment facilities.

1.1 SOAPBERRY WASTE WATER TREATMENT PROJECT

Over two decades ago, George Yarrow (1986) in Privatisation in Theory and In Practice posited that "in general, competition and regulation are likely to be more important determinants of economic performance than ownership". This suggests that where there are deficiencies, the policy priority should be to increase competition and improve regulation, not necessarily to transfer these activities to the private sector. Jamaica however, like many other developing countries have assessed the state of its infrastructure and acknowledged the double challenge from increasing demand with ageing assets, coupled with an ever growing debt burden that has crippled its financial capacity. As a consequence, policy makers are increasingly departing from Yarrow's assertion and depending more on private sector involvement to "attract investment and mobilize private sector resources for the benefit of society and sustainable development" OECD (2007). This has required the re-evaluation of both the goals and instruments Jamaica has used since its emergence as a modern state. One of her most recent demonstration of this shift and the subject of this paper is the collaboration with the private sector for the design, construction, operation and maintenance of the Soapberry Waste Water Treatment Plant.



1.1.1 **Background**

The sewerage system in the Kingston Metropolitan Region (KMR) has been in a deplorable state for some three decades and was considered one of the primary contributors to the deterioration of the Kingston harbour[1] which is located on the south-eastern coast of Jamaica, bordering the Capital and operating as the country's major port (See Figure #41 below). At present, only about 30% of the estimated 272.7 million litres (60 million gallons) per day of the capital's waste is being collected by the National Water Commission (NWC) network. Owing largely to lack of maintenance and the conveyance of sewage well beyond their design capacity, two major existing treatment plants, operated by the state agency have failed to function adequately. Consequently, large volumes of untreated sewage were discharged daily[2] , resulting in the ecological deterioration of the harbour which is considered a major environmental asset.

[1] The Kingston Harbour is the world's 7th largest natural harbour.

[2] Approximately 68-91million litres (15-20 million gallons) of poorly treated sewage.

The Kingston Harbour is used mainly for fishing, shipping, recreation, industry and commerce. The greatest and most immediate impact of the harbour's pollution is being felt by the fishing activities of the 3,386 fishermen who operate from seven (7) fishing villages, bringing approximately 1.1million kg (1,100 tonnes) of fish per annum[3].

In addition to the plants, the extension of the sewerage system in the KMR was also neglected and consequently, most of the buildings in the city are not connected to sewers but to absorption pits which permit only a very basic level of treatment. See Figure #42 below. A further consequence of this situation is that the aquifers under the city currently have unacceptably high nitrate levels and cannot be used as a source of increased water supplies.

In spite of a tariff structure that not only allows for cost recovery (capital and operational), but also rehabilitation and improvements, the NWC has been unable to generate adequate surpluses to finance regular maintenance and expansion of the system. A sectoral diagnosis done by the Ministry of Water and Housing in 1999 resulted in a Water Sector Policy which speaks to the sewering of all major towns by 2020 and the rehabilitation of existing facilities to meet current tertiary standards set by the National Environmental Planning Agency (NEPA). Such goals coupled with limited funds explained the policy decision to open sanitation services to the private sector, on condition that entrants into the market did not compete against the State agency.

In 2004 the Government of Jamaica (GOJ), commenced the Inner City Housing Programme for the provision of high density housing solutions in Kingston's inner city. Completion of the project was contingent upon the construction of new sewage plants as NEPA determined that no additional sewage flows would be allowed into the malfunctioning plants. With the timely completion of the housing development hanging in the balance, the Government dusted off the studies done in 1993 for the Soapberry Wastewater Treatment Plant (shown in Figure # 36) which was conceptualized around a comprehensive programme [4].

[3] http://www.nrca.org/kingston%20harbour/html/Resources.htm Website of the NEPA

[4] SENTAR, (December 1993) Kingston Harbour Environmental Project – Final Phase II Report

The Soapberry PPP is nested within this comprehensive programme that was projected to cost some USD $400 million and involves three distinct phases [5]namely:

Aerial Photo of the Soapberry Plant, Jamaica
Source: WOMC

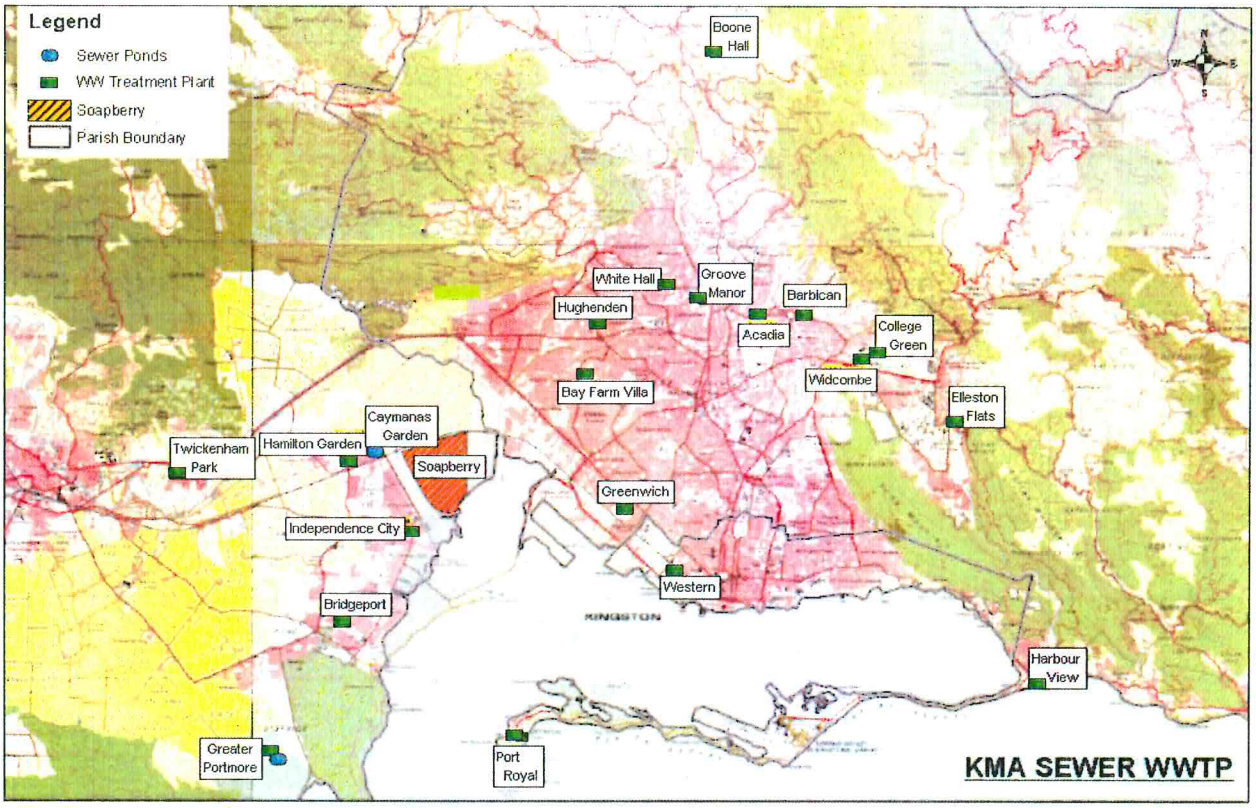
- Phase 1A: Retire existing older plants and construct new treatment works at Soapberry to collect and treat existing flows.
- Phase 1B: Extend the central sewer network to selected areas.
- Phase 2: Further expansion of sewers and plant.

The Public private partnership addressed Phase 1A and included:--

- Construction of a18 million gallons per day plant
- Construction of trunk sewers
- Connection /rehabilitation of existing pump station.

Located on 160 hectares (400 acres), the treatment plant has an intake capacity of 68,137cubic meters (18 million gallons) per day and can facilitate some 600,000 residential and commercial customers in the designated areas.

[5] NWC report to the Board of Directors – dated November 2, 2004



Maps of Sewered & Unsewered Areas of Kingston
Source: NWC

The limiting factor for the Government of Jamaica was the question of how the project would be financed. According to Vining and Boardman (2008) despite the many variations, there are basically three major options for infrastructure delivery; direct public provision, contracting-out or public– private partnerships (P3s). The GOJ opted to employ the model of public-private partnerships. But before we make scrutiny of the project at the micro-level by evaluating its consistency with the literature on PPPs, we must first seek to understand the peculiar challenges facing the sanitation sector that must be taken into consideration in the design and development of the PPP process.

1.1.3 Challenges facing the sector

All infrastructure projects carry risks; however the water and sanitation sector with which sewage collection, treatment and disposal is associated can be more challenging than others. According to IMTA-OECD (2008), it is usually very capital intensive, involving high initial investment, long payback periods, and low rate of return[6]. The infrastructure is "fixed, very specific and cannot be used for other purposes or removed from the country" and is associated with important externalities on health and the environment. Revenues are mainly from user fees and/or government subsidies in a local currency which exposes it to foreign exchange risk. Finally, this sector carries with it, social and political repercussions that have led to rigid tariff setting without enough consideration for real costs and increases in political interference. Kessides (2004) in the World Bank's policy research report on Reforming Infrastructure posits that "underinvestment, largely caused by under pricing, has been the key problem of the state-owned utility model". This of course, leads to deterioration in the quality of the service provided.

In the Jamaican context, that assessment rings true but the challenges are even direr, as the large stock of public debt places a claim on the country's future tax receipts and the government's borrowing ability. Implicitly, the government's future income stream is allocated to debt repayment and therefore less is allocated to the development and maintenance of infrastructure which would encourage private investment. Consistent with recommendations for long term financial sustainability, policy decisions in the early 1990s significantly lessened the NWC's dependence on Central Government transfers and with the support of the OUR has placed reliance on user tariffs that allow for cost recovery.

Notwithstanding, its last audited financial statement reported "revenues of almost $20.3 billion against expenses of $22.3 billion during the financial year ending March 2012, posting a net operating deficit of $2 billion.[7]

[6] Estimated by the African Development Bank to be between 5 and 10 percent (compared to 17-25 percent in the power sector and 25-30 percent in telecommunications.

[7] Audited Financial Statements for the period ending March 31,2012

1.1.4 Wastewater Sector Policy

With regards to the Soapberry project, Jamaica adopted a new Water Sector Policy in 1999 which reinforces support of the private sector initiatives to improve sector performance. On the political and policy setting side, responsibility for this rests with the Minister of Water and Housing.

The policy states that owing to the capital intensity of providing sanitation services "private operation of water services will be encouraged to relieve the Government of the full burden of financing the sector". It identified private participation as a means not an end in itself and set out the criteria that such future undertakings should meet. The projects had to satisfy:-

1. Terms for privatisation that are in the country's best interest;
2. Improve economic efficiency in the sector, in both operating performance and the use of capital investment;
3. Technical and managerial expertise and new technology into the sector to achieve productivity improvements;
4. Injection of large-scale investment capital into the sector and/or access to private capital markets, thereby reducing public investment;
5. Insulation of the sector from short-term political intervention in utility operations and limitation of opportunities for intervention by powerful interest groups;
6. Transfer of the risks and responsibilities of ownership from Government to the private sector over the long term;
7. Delivery of a reliable and efficient service to communities throughout the island;
8. Making the sector more responsive to consumers' needs and preferences.

2 POLICY FRAMEWORK AND OBJECTIVES FOR CWTC

2.1 GENERAL

The Government of Jamaica (GOJ) has developed a Water Sector Policy (WSP) which was finalized after island wide town meetings where public input was solicited.

The management of Jamaica's water and sanitation sector is shared by a number of agencies which are responsible for setting policy, providing services and ensuring that regulatory standards are being met.

As it relates directly to the delivery of sanitation services by the private sector, the primary legislative instruments are:

- Public Health Act, 1974
- National Solid Waste Act, 2002
- Fair Competition Act, 1995
- National Water Commission Act, 1980, (amended in 2004)
- Office of Utility Regulations Act, 1995 (amended in 2000)
- GOJ Procurement Policy 2001
- National Water Sector Policy 1999

2.2 RELEVANT TENETS OF THE WATER SECTOR POLICY

The key aspects of the WSP in relation to CWTC's tariffs may be summarized as follows:

2.2.1 Institutional Responsibilities

- OUR shall have responsibility for approval of fees and tariffs based on agreed standards;
- MOWH, in consultation with stakeholders, will carry out the legislative reforms necessary to give effect to the Policy;
- NRCA shall continue to have responsibility for monitoring and enforcing compliance with environment standards.

2.2.2 Financing and Cost Recovery

- Cost recovery mechanisms shall be used to ensure that the direct beneficiary pays to the extent feasible for the reasonable costs associated with provision of the service.

2.2.3 Operating Cost Recovery

- Where necessary to achieve social objectives, GOJ will provide subsidies otherwise payable by the consumer for 'social water'. Recovery of these costs is fundamental to the viability of the entity providing the service.

2.2.4 Financing Capital Costs

Funding will be accessed through:

- Millage (charges levied in addition to tariff to fund new projects);
- Finance provided by the private sector;
- Government grants for specific works with high social or environmental value.

2.2.5 Financing Infrastructure for Housing and Other Developments

- The developer shall be required to meet all on-site infrastructural costs;
- The developer shall be required to provide capital to construct or assist with the construction of off-site infrastructure required to take water to the development.

2.2.6 Tariff Structure

The tariff shall be designed to allow for:

- A life line rate;
- Full cost recovery to the extent that costs are not subsidized;
- Differential rates where appropriate.

2.2.7 Tariff Regulation

- OUR will be responsible for setting tariffs at a level which allows CWTC to fully recover reasonable costs (including capital and operating costs);
- CWTC will be responsible for increasing efficiency of operations;
- Where exceptional circumstances dictate the need for additional funds for systems improvements or rehabilitation, OUR will take this into account in setting tariffs.

2.2.8 Social Water

Social water refers to the provision of the minimum levels of potable water and sewerage services to persons who cannot afford the full cost of such services. The definition is also expanded to include water supplied to the public at large in circumstances where collection of payment from the user is impractical.

The relevant stakeholders, including the OUR and the Ministry of Finance and Planning, shall agree on revenue sources for social water including:

- Tariffs and user fees;
- Cross subsidies;
- Direct subsidies.

3 LEGAL AND REGULATORY FRAMEWORK

The legal/regulatory framework applicable to CWTC is based on the following:

- CWTC will be treated similar to other service providers including those owned and operated by the private sector;
- CWTC is intended to be operated as a commercially viable business;
- Tariffs are to be set to allow for full cost recovery, including the recovery of capital, operating and maintenance costs, to the extent that this is required to ensure the viability of the company and that the company is implementing reasonable measures to operate in an efficient manner;
- CWTC shall comply with any schemes introduced by the Office from time to time to enhance customer service and Quality of Service generally.

4 SPECIAL CONDITIONS AND PERFORMANCE TARGETS

The OUR incorporate Special Conditions in the CWTC License

Special Conditions of License

A. Environmental Standards

The Licensee shall conform to all and any standards that may be established by NEPA/NRCA. The Licensee shall provide the Office with copies of any license standards, special permits issued by NEPA/NRCA from time to time, which shall form part of this License.

B. Service Standards

1. The Licensee shall meet, as a minimum the following service standards:
   (a) The Licensee shall clear 90% of all reported blocked mains within 4 hours of the report being received.

   (b) Odor

The Licensee shall maintain the plant in such a manner as to minimize complaints of odor. There shall be no more than 5 complaints regarding odor from all facilities in any month.
The Office may from time to time, introduce additional or vary these service standards and will have regard to the performance of the Licensee in meeting these standards at the tariff review.

C. Guaranteed Standards

The Licensee shall implement a scheme of guaranteed standards which may be prescribed by the Office from time to time.

In any such scheme, the Office will determine from time to time, the level of compensatory payment to be paid by the Licensee to the customer should the Licensee breach any standards so prescribed.

D. Billing

The Licensee (or its designee) shall provide appropriate bills to its customers on a monthly basis detailing the basis for all charges.

E. Reports to the Office

The Licensee shall provide the following annually to the Office

1. Costs and revenues associated with each customer category.
2. Customers based reports showing total number of customers per category (that is, industrial, commercial or domestic)
3. No. and type of connections to other utilities.
4. Sewerage report for the relevant period detailing.
   - total volume of sewage collected from other utilities
   - total volume of sewage treated
5. Effluent quality reports for each quarter.
6. Schedules of maintenance programme.
7. Number of employees.
8. Total number of new service applications.
9. Total number of new sewerage connections.

10. Total number of delinquent customers (three billing periods in arrears).

11. Faults (blockages) reported in collection, conveyance and treatment.

12. Average time taken to clear faults.

13. Level of compliance with NEPA environmental quality standards.

14. Facilities in /out of service and period of time out.

15. Treatment capacity of sewerage plants:

- plant type (ponds, package, etc)
- installed capacity
- average throughput
- availability

16. Hours of electric power outages to plant.

F. Provision of prescribed services to other Utilities

The Licensee is entitled to provide any combination of the services specified in the Licensed Business to any other licensed service provider or developer by way of a connection or connections to the Licensee's infrastructure.

In such cases the parties may enter into negotiation/commercial agreements. Before concluding such agreements, the Licensee must receive the approval of the Office.

Specifically, and for the avoidance of doubt, the rates and charges to be applied under this section by the Licensee must be approved by the office.

5 ROLE OF WASTEWATER TARIFF

Wastewater tariff perform two critical functions as follows:

- Act as a signal to consumers on what it costs to provide the services, allowing them to make informed decisions about whether their use will generate benefits in excess of costs. In this way tariffs are a key factor in encouraging efficient levels of use.
- Tariffs are the main means by which the utility funds the ongoing costs of providing wastewater services. Tariff also provide for the recovery of capital to support renewal and expansion of sewerage systems and improve quality of service.

Based on the above, the CWTC tariff should be reviewed on two dimensions as follows:

- The level of revenue provided to the only customer (NWC).
- The structure of the charge in terms of the signals it provides to service users

6. REVIEW OF WASTEWATER TARIFF

6.1 OVERVIEW OF WASTEWATER BUSINESS

6.1.1 General

The wastewater business comprises two primary functions, sewage conveyance and sewage treatment (including also effluent disposal). Only a fraction of the NWC's water customers receive a sewerage service, ranging from 8% in the Northern and Central regions to 54% in the Southern region.

6.1.2 FINANCIAL AND OPERATION OVERVIEW

The CWTC began testing operation in 2007. The company provides service to its only customer (NWC) as outlined below:

	J$
Year ended 31 March 2009	1,097,295,180
Year ended 31 March 2010	840,000,000
Year ended 31 March 2011	840,000,000

SEWAGE INFLOW VOLUMES TO SOAPBERRY

The total sewage inflow volumes to Soapberry for the period 2007 to 2012 are as follows:

Year	Cubic Meter (M^3)[8]
2007	444,444
2008	6,349,793
2009	8,814,880
2010	11,572,433
2011	11,110,100
2012	13,444,470

The period 2007 to February 2008 is regarded as Testing (Pond filling & testing) with commercial operation date (COD) been March 14, 2008. See appendix E-F for detail sewage inflow volume.

[8] 1 Cubic Meter = 264.172052 Gallons [Fluid, US]

SUMMARY OF FINANCIAL RESULTS FOR PERIOD 2008 TO 2011

The financial results of CWTC for the period 2008 to 2011 shows significant losses with an accumulated deficit of J$485,868,152 as at 31 March 2011.

The company suffers significant losses as a result of Bad Debt and foreign exchange loss due to the devaluation of the Jamaican dollar. See the summary results below:

	31 March 2009	31 March 2010	31 March 2011
	$	$	$
Revenue	1,097,295,180	840,000,000	840,000,000
Plant Operating Cost	300,160,643	264,979,987	182,671,927
Other Admin. Cost	22,284,826	43,194,691	44,899,471
Bad Debt	411,724,354	125,570,826	-
Foreign Loss/ (Gain)	560,268,267	(38,164,871)	(118,770,000)
Total Operating Cost	**1,294,438,090**	**433,745,504**	**108,801,398**
EBIT DA	**(197,142,910)**	**444,419,367**	**731,198,602**
Interest	(354,529,584)	(359,704,990)	(353,793,630)
Depreciation	(222,814,813)	(180,602,829)	(167,595,544)
Loss before Grants	(774,487,207)	(95,808,452)	209,809,428
Interest Income	4,586,659	-	-
Grant from GOJ	-	169,926,140	-
Profit / (Loss) after Grants[9]	**(769,900,648)**	**74,223,068**	**209,809,428**

In addition to the accumulated deficit of J$485,868,152 as at 31 March 2011; the Company suffers from significant cash flow problems as a result of its only customer failure to settle Invoices on a timely manner.

As at March 31, 2011 the total amount receivable from the National Water Commission amounts to $1,468,242,705. This is approximately 53% of the total billing of $2,777,295,180 to them since the commercial Operation Date of March 14, 2008 to March 31, 2011. The Auditors for CWTC noted in their Report for the period ending March 2010, that the Company's ability to continue as a going concern is dependent on future profitable operations, revenue agreements arrived at with the NWC, the NWC honouring its obligations in a timely manner, and the company obtaining any necessary funding or grants.[10]

[9] See Detail Financial Reports at Appendix A-D

[10] Muir Russell Grant Thornton Report –Appendix C

6.1.4 Volume / Revenue/Cost Analysis

In April 2008, the NWC was granted a tariff of $840M for the sewage treatment plant operated by CWTC. This is the basis of the company's charge to the NWC. The total volume of sewage increase during the period 2008 to 2011, however this did not result in additional income. The table below illustrate volume intake vs revenue for the period.

Year	Revenue Year ending March 31	Volume [11] (M^3)	Revenue per (M^3)	Total Operating Cost	Total Operation cost per (M^3)
2007	J$0	444,444			
2008	J$0	6,349,793			
2009	J$1,097,295,180	8,814,880	J$124.48	J$1,867,195,828	J$211.82
2010	J$840,000,000	11,572,433	J$72.59	J$935,808,452	J$80.87
2011	J$840,000,000	11,110,100	J$75.61	J$630,190,572	J$56.72
2012	J$840,000,000	13,444,470	J$62.48	Note [12]	

While the company experiences a reduction in operation cost per cubic meter of sewage during the period 2009 to 2011; it is exposed to serious foreign currency losses if the Jamaican dollar devalues against its United States counterpart. It is expected to suffer significant losses in 2012/2013 due to the devaluation of the Jamaican Dollar.

The Company Bank loan amounts to US$37 Million with an interest rate of 11.2494%.

Every J$1 devaluation of the J$ versus US$ will result in a foreign currency loss of J$37 Million.

[11] This is based on calendar months

[12] Not yet available

6.1.5 Annual Balance Sheet Summary

Description	*Year 2008*	*Year 2009*	*Year 2010*	*Year 2011*
Property ,plant and equipments				
Land	$ 65,000,000.00	$ 77,008,684.00	$ 77,008,684.00	$ 77,008,684.00
Intangible Asset	$ -	$ 12,955,469.00	$ 12,989,241.00	$ 12,989,241.00
Building		$ 15,995,322.00	$ 17,863,198.00	$ 15,937,083.00
Furniture/ Equipments		$ 28,397,745.00	$ 29,374,292.00	$ 16,292,269.00
Machinery/ Equipments		$ 32,240,310.00	$ 40,514,109.00	$ 23,356,738.00
Sewage Plant/ Equipments	$ 3,199,887,714.00	$ 3,232,738,401.00	$ 3,232,738,401.00	$ 2,861,486,269.00
Total	**$ 3,264,887,714.00**	**$ 3,399,335,931.00**	**$ 3,410,487,925.00**	**$ 3,007,070,284.00**
Accumulated Depreciation	$ -	$ (222,814,812.00)	$ (403,417,641.00)	$ (167,595,544.00)
Total Property, plant and equipments	**$ 3,264,887,714.00**	**$ 3,176,521,119.00**	**$ 3,007,070,284.00**	**$ 2,839,474,740.00**
Current Assets				
Trade/ other receivables [1]	$ 8,268,482.00	$ 541,125,635.00	$ 1,076,970,987.00	$ 1,468,242,705.00
Prepayments	$ -	$ 22,240,727.00	$ 12,560,855.00	$ 12,560,855.00
Withholding Tax recoverable	$ -	$ 1,154,329.00	$ 1,197,256.00	$ 1,197,256.00
Short-term Investments	$ 41,027,781.00	$ -	$ -	$ -
Bank	$ 641,238.00	$ 3,530,815.00	$ 23,104,513.00	$ 9,237,767.00
Total	**$ 49,937,501.00**	**$ 568,051,506.00**	**$ 1,113,833,611.00**	**$ 1,491,238,583.00**
Total Assets	**$ 3,314,825,215.00**	**$ 3,744,572,625.00**	**$ 4,120,903,895.00**	**$ 4,330,713,323.00**
Equity and Liabilities				
Capital and Reserves				
Share Capital	$ 845,066,000.00	$ 845,066,000.00	$ 845,066,000.00	$ 845,066,000.00
Revaluation reserves	$ -	$ 67,162,664.00	$ 67,162,664.00	$ 67,162,664.00
Accumulated losses	$ -	$ (769,900,647.00)	$ (695,677,580.00)	$ (485,868,152.00)
Total	**$ 845,066,000.00**	**$ 142,328,017.00**	**$ 216,551,084.00**	**$ 426,360,512.00**
Current Liabilities				
Account payables and accruals	$ 84,716,340.00	$ 185,370,960.00	$ 412,265,786.00	$ 412,265,786.00
Retention Payables	$ 68,693,920.00	$ 85,460,521.00	$ -	$ -
Contracts Levy	$ 1,373,955.00	$ 97.00	$ -	$ -
Other Loan -UDC	$ -	$ -	$ 102,635,831.00	$ 102,635,831.00
Short Term-Loan	$ -	$ 52,635,831.00	$ -	$ -
Total	**$ 154,784,215.00**	**$ 323,467,409.00**	**$ 514,901,617.00**	**$ 514,901,617.00**
Non-Current Liabilities				
Other Loan- NHT	$ -	$ -	$ 98,053,294.00	$ 98,053,294.00
Bank Loan	$ 2,314,975,000.00	$ 3,278,777,200.00	$ 3,291,397,900.00	$ 3,291,397,900.00
Total	**$ 2,314,975,000.00**	**$ 3,278,777,200.00**	**$ 3,389,451,194.00**	**$ 3,389,451,194.00**
Total Equity and Liabilities	**$ 3,314,825,215.00**	**$ 3,744,572,626.00**	**$ 4,120,903,895.00**	**$ 4,330,713,323.00**

6.1.6 Balance Sheets Highlights

The Balance sheet for the period 2009 to 2012 provides critical information regarding the following Items:

- ✓ **Fixed Asset:**
  The total Capital cost as at March31, 2009 amount to J$3,264,887,714

- ✓ **Receivables:**
  The Receivables as at March 31, 2011 amount to J$1,468,242,705

- ✓ **Payables**
  The Payables as at March 31, 2011 amounts to $412,265,786

- ✓ **Loan**
  The company is financed via a loan from NCB amounting to US$37 Million. This bears an interest rate of 11.2494% with the following terms:

  The loan is secured by:

A First Legal Mortgage of the Borrower's leasehold in the Lease Agreement between the Borrower and National Water Commission for property registered at Volume(s) I 100 Folio(s) 959 on which the Plant is situated ("the Plant Land") with the following items stamped and registered collateral thereto:

(i) Consents from the relevant proprietors of the Plant Land in respect of the mortgage of the company's interest referred to above;

(ii) First Legal Debenture from the Borrower evidencing fixed and floating charges over the present and future assets of the Borrower stamped to cover the Aggregate principal Sum (and with the power to up stamp);

(iii) Assignment of the Borrower's interest in the Undertaking from the Government of Jamaica acting through the Ministry of Finance and Planning, guaranteeing the payment obligations by the National Water Commission under the Wastewater Treatment Agreement dated 150 day of March, 2006;

6.1.6 Balance Sheets Highlights cont'd

(iv) Several Guarantees from each of the Shareholders (those being National Housing Trust Urban Development Corporation, Ashtrorn Jamaica Limited and National Water Commission) in proportion of their shareholding in the Borrower in favour of the Bank on behalf of the Borrower stamped to cover the Aggregate Principal Sum (and with the power to unstarnp);

(v) First Ranking Charge over the Collection Account;

(vi) First Ranking Charge over the Sinking Fund Account and

(vii) Assignment of the Borrower's interest in the Letters of Credit to be established by the National Water Commission pursuant to Section 10.4.1 of the Wastewater Treatment Agreement.

b. First Legal Mortgage over the Plant Land if it or any part thereof, is subsequently transferred to the Borrower.

c. Evidence of satisfactory placement of fire and allied peril insurance to cover property and operations of the Bank's interest duly noted thereon.

d. Parliamentary Guarantee for US$37M. The loan is due July 4, 2018.

The company currently has negative return on capital with accumulated deficit in excess of J$485 Million as at March 31,2011 which is expected to increase significantly for the period ending March 31,2013.

7 THE TARIFF REQUEST

In keeping with the terms of licence granted to Central Wastewater Treatment Company (CWTC) Limited in 2006 we are requesting an initial tariff effective during the financial year 2013/2014. Our application is in keeping with terms and condition of "SCHEDULE 3" of the licence.

7.1.1 Test Year

The test year for this application is the period ending March 31, 2010[13]

"Test Year " shall mean the latest twelve months of operation for which there are audited accounts and the results of the test year adjusted to reflect:

(i) Normal operational conditions, if necessary;

(ii) Such changes in revenues and costs as are known and measurable with reasonable accuracy at the time of filing and which will become effective within twelve months of the time of filing. Costs, as used in this paragraph shall include depreciation in relation to plant in service during the last month of the test period at the rates of depreciation agreed with the Office.
Extraordinary or Exceptional items as defined by The Institute of Chartered Accounts of Jamaica shall be apportioned over a number of years not exceeding five years; and

(iii) Such changes in accounting principles as may be recommended by the independent auditors to the Licensee.

7.1.2 Rate Base

"Rate Base" means the value of the net investment in the Licensed Business. Rate Base shall be calculated based on the net sewerage system investment made by the Licensee at the end of the last financial year for which there are audited accounts, at the time the rates are being set. The Rate base shall include appropriate rate making investments to take into account known and measurable changes in the plant investment base and shall be increased or reduced by any positive or negative working capital requirement that may exist at such time. Working capital shall include among other things, cost of appropriate levels of inventories.

The Rates for the supply of services by the Licensed Business shall be set such that it provides a reasonable opportunity for the Licensee to make a reasonable return on capital employed after taking into account all reasonable costs incurred in the provision of the services.

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[13] See Detail Financial Statement for Period ending March 31,2010 at Appendix C

7.1.2 Rate Base cont'd

The Base Revenue Requirements will be determined as follows:

Base Revenue Requirement= operating costs+depreciation+taxes+return on investment, with each component defined as follows:

Operating costs: All prudently incurred costs which are not directly associated with investment in capital plant, other operating costs shall include, but not be limited to: salaries and other cost related to employees; operating costs if the licensed business; interest costs on other borrowings not associated with capital investment, if applicable; rents and leases on property associated with the Licensed Business; taxes which the Licensee is required to pay other than income taxes of the Licensee; and other costs which are determined to be reasonably incurred in connection with the Licensed Business.

Depreciation: The depreciation component will be calculated by applying annual depreciation rates, as provided by schedule 3A of the Licence, to the gross value of the individual plant asset accounts.

Schedule 3A

	Economic Life Year's	Depreciation Rate %
Sewage Treatment Plant	20	5
Pumping Stations	20	5
Trunk Sewers	20	5
Other Sewerage Works	20	5
Tertiary Treatment Module	20	5
Fixtures & Module	20	20
Office Equipment	5	33.33
Motor Vehicle	5	20

Taxes:
Taxes which are calculated based on the net income of the licensee (Income Tax) and payable to the Government of Jamaica.

7.1.3 Return on Investment & Tariff Calculations

This component is calculated based on the approved Rate Base of the Licensee and the required rate of return which allows the licensee the opportunity to earn a return sufficient to provide for the requirements of the consumers and acquire new investments at competitive cost.
The Return on Investment is calculated by multiplying the allowed rate-of –return by the CWTC's total Investments base (Rate Base) for the test year. The allowed rate of return is CWTC's Weighted Average Cost of Capital (WACC).

On June 14, 2010, Cabinet considers and approved the transfer of shares from UDC, Ministry of Water and Housing and NHT to the NWC for a nominal value of J$1 each and write-off all loan balances due from CWTC to those entities. [14] This action results in NWC becoming the majority shareholder of CWTC with 85.2% of the issued shares, with Astrom being the minority shareholder with 14.8%.

In view of the above CWTC's WACC is estimated to be similar to the cost of Debt which is currently 11.2494% base on the US$37 Million loan from NCB. This assumption is based on the fact that the minority shareholder (Astrom) is a private company and cannot influence dividend policy.

7.1.4 Tariff request

We are requesting a tariff which will yield revenue of $2.4 Billion Jamaican Dollars in the first year of the tariff.
Using the Actual Volume of sewage flow for the base year (2010) of 11,572,433 cubic metre (M^3) for the 12 months period January 1,2010 to December 31,2010 will result in an average charge of J$210.32 per M^3 (J$2,433,856,382/11,572,433).

Year	Revenue Year ending March 31	Volume [15] (M^3)	Revenue per (M^3)	Total Operating Cost	Total Operation cost per (M^3)
2007	J$0	444,444			
2008	J$0	6,349,793			
2009	J$1,097,295,180	8,814,880	J$124.48	J$1,867,195,828	J$211.82
2010	J$840,000,000	11,572,433	J$72.59	J$935,808,452	J$80.87
2011	J$840,000,000	11,110,100	J$75.61	J$630,190,572	J$56.72
2012	J$840,000,000	13,444,470	J$62.48	Note [16]	

[14] See note 21 of CWTC's Audited Financial Statement for the period ending March 31,2010

[15] This is based on calendar months

[16] Not yet available

The proposed tariff would allow the CWTC to recover operating and maintenance costs and be able to repay its current loan principal of US$37 Million when it becomes due in 2018. In addition to continuously improve operating efficiency, system reliability and quality of service.

In addition, we propose the following:

- The rate of J$210.32 per M^3 or US$2.24 at current exchange rate of J$94: US$1 be adjusted in accordance with NWC PAM Factor. This will help the company manages its foreign currency risk.

- The establishment of a Sewage Factor (S Factor) account where the NWC will lodge all Sewerage charges from the areas connected to the CWTC facility. This measure will allow for better management of CWTC receivables and ensure the company remains a viable entity.

7.1.5 CWTC Budget under current Interim Agreement

The Current CWTC Budget (Appendix E) for the period ending March 31,2013 shows a monthly deficit in excess of J$3 Million under the assumption that NWC pays J$70 Million per month. A negative net cash flow position is thus projected for the foreseeable future under present wastewater tariffs with resulting growth in negative cash balances. A position that is unlikely to be sustainable without financial assistance.

7.2 WHAT ARE THE UNDERLYING ASSUMPTIONS?

7.2.1 Demand forecast

Demand is important in the tariff setting process as it, along with tariffs, determines the level of revenue the business will earn. Demand is forecast in terms of number of sewage intake into the Soapberry Plant.

The number of connections is forecast to increase with population growth and the Portmore Sewage Project.

Portmore is the second largest urban area in the parish of St. Catherine. Based on the Population Census 2001, its population was 156,000 which was 1.57 times the population in 1991. Numerous housing schemes have been implemented in Portmore, and it has become a bedroom suburb of Kingston St. Andrew (KSA).

The sewerage infrastructure in Portmore is extensive and well developed and includes five (5) wastewater treatment plants (WTPs). Over 95% of the population is connected to NWC sewerage and estimated that an average of 36,400 cubic meters per day (m^3/d) of sewage flows to these plants (i.e. 8 million gallons per day (mgd)).

Four of these sewage treatment plants, that receive a combined flow of just over 18,200 m^3/d (4 mgd) sewage, form the basis for the proposed Portmore Sewerage Project (PSP) and these are the:

- Independence City WTP,
- Bridgeport Sewage Treatment Plant WTP,
- Hamilton Gardens WTP
- Caymanas Gardens WTP

These facilities are in an advanced state of disrepair, and none is operating satisfactorily. For these and several other reasons, the NWC wishes to decommission these facilities and deliver their influent sewage to the Soapberry WTP, which is a 75,000 m3/d capacity wastewater treatment plant (i.e. 16.5 mgd) that now treats wastewater that is collected in KSA. Less than 45,000 m^3/d (10 mgd) is now treated at the Soapberry WTP.

Under the PSP it is planned to:

a) Decommission these four wastewater treatment plants and convert them to transfer pumping stations which would transfer sewage to the new Soapberry WTP for treatment; and
b) Installation of sewer pipelines between the said transfer pumping stations and Soapberry WTP, which would include a pipe bridge that crosses the Rio Cobre River.

7.2.2 EXISTING PORTMORE SEWERAGE

Portmore is one of the island's most densely populated zones and over the last forty years has successfully provided home ownership opportunities for many Jamaicans. The early communities of Waterford, Gregory Park, Edgewater and Bridgeport have been joined by a number of others such as Braeton, Garveymeade, Westchester, Greater Portmore, Hellshire and there are now over sixty (60) communities in the wider Portmore area. Figure 2.1 is a general view of the Portmore area.

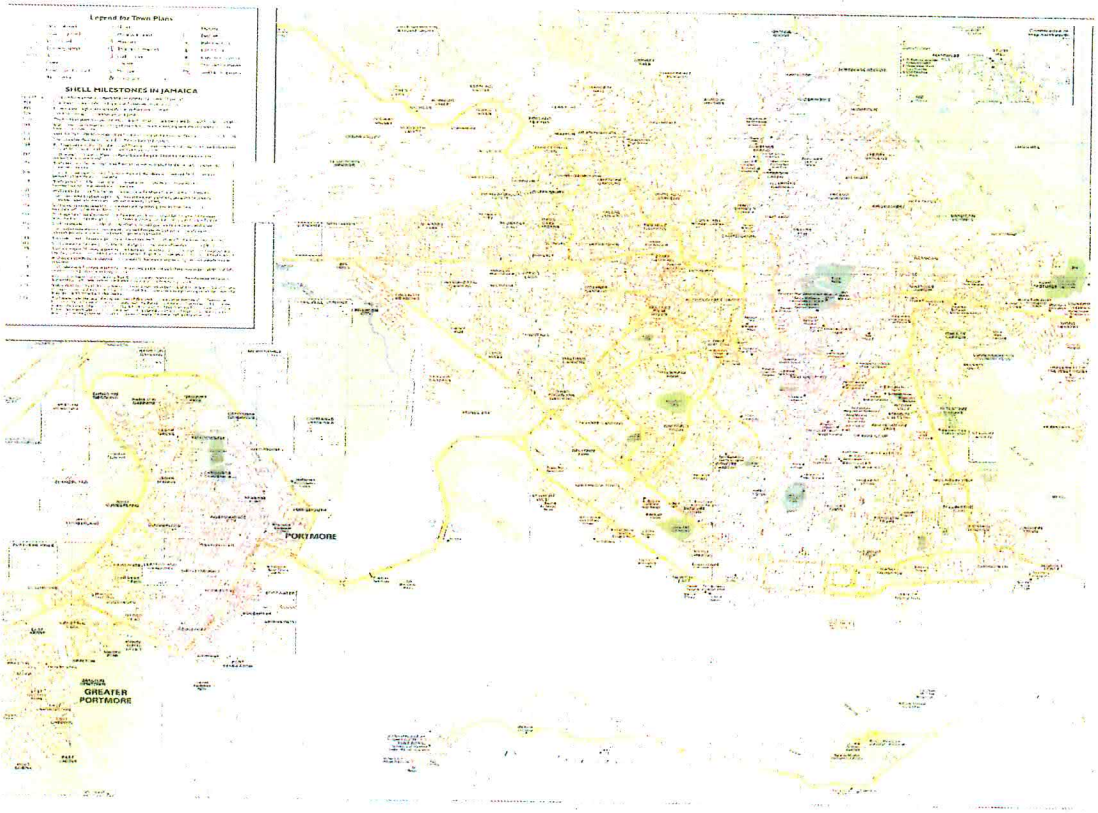
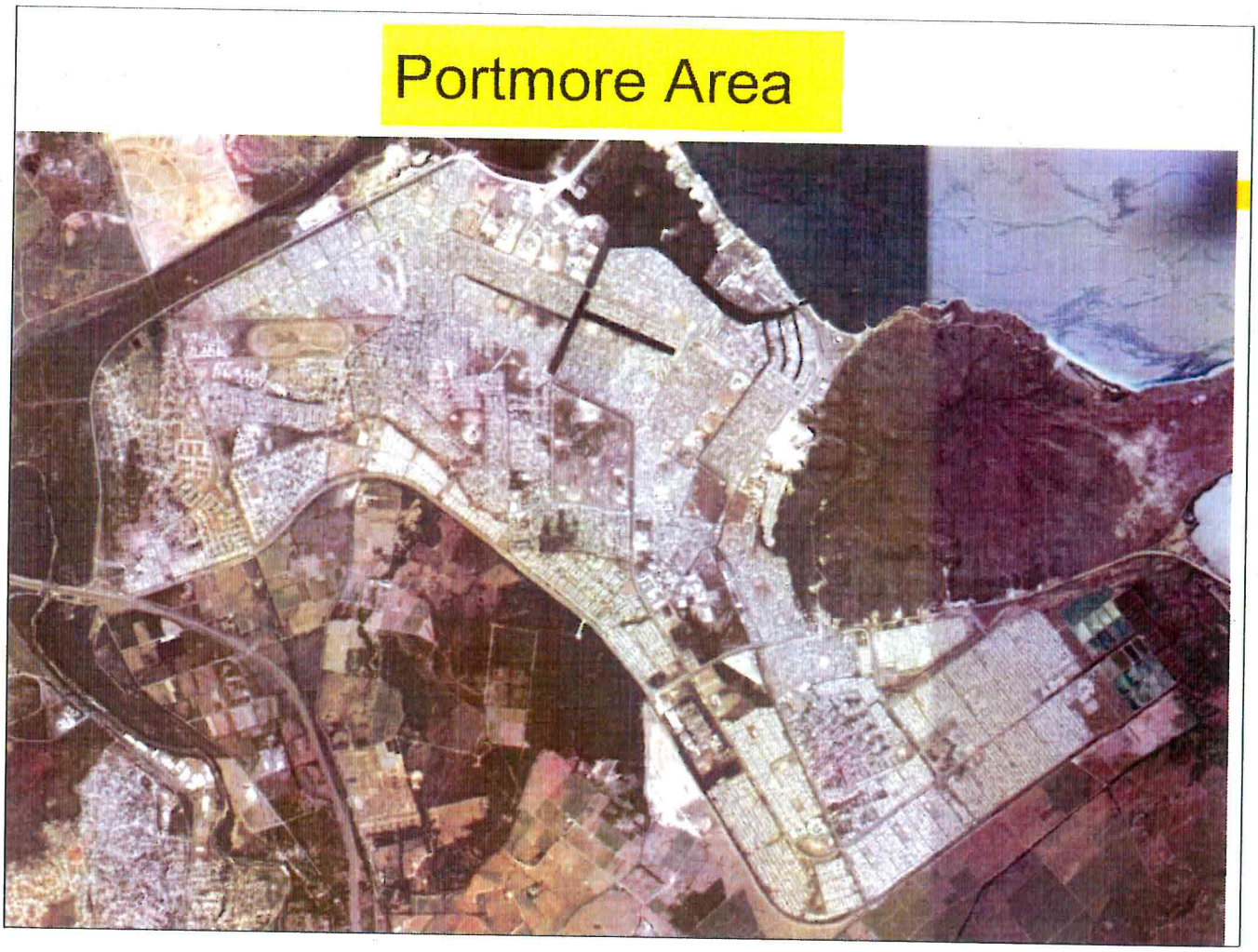


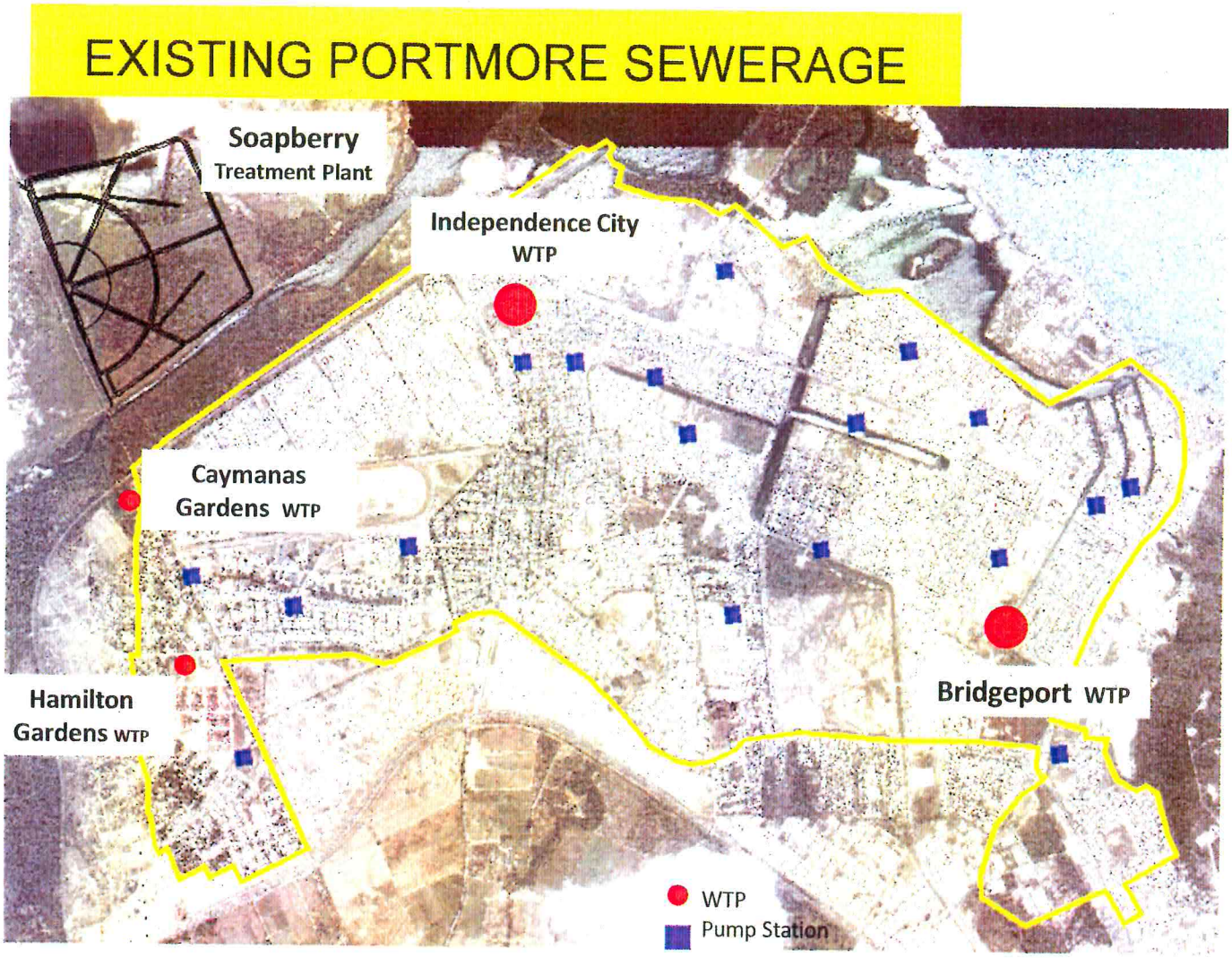
Figure 2.1 – General View of the Portmore Area



The boundary of the area of the proposed project is defined as follows:

- East and South of the Dyke Road
- North of Hunts Bay and the Caribbean Sea
- South of the Municipal Boulevard
- Between Hellshire Main Road and Braeton Parkway.
- West of Braeton Parkway.

Figure 2.2 shows the location of the four wastewater plants that are to be replaced as well as that of the Soapberry WTP.



7.2.2 Portmore Sewerage Project Scope

In February 2010, the report, the Preparatory Survey for Kingston Sewerage Development Project", was completed by Nippon Koei Company Limited. This was a study that was financed by a grant from the Japan International Cooperation Agency (JICA). This study examined:

a) Expansion of the sewered area in northern KSA;

b) Decommission of current four sewage treatment plants in Portmore and conversion of those plants to transfer pumping stations to Soapberry STP;

c) Installation of sewer pipelines between the said transfer pumping stations and Soapberry STP including pipe bridge crossing the Rio Cobre River; and

d) Installation of backup generators to new transfer pumping stations in Portmore.

For the Portmore Sewerage, one of the options considered broadly involves the following:

a) New Bridgeport Pump Station

- Installation of 2,630 m of 400 mm diameter force main to the Independence City plant.

- Provision of pumps as follows: 3 pumps each of capacity 90 lps @ 20 m TDH / 25 kW.

b) Independence City Pump Station

- Installation of 3 210 m of 600 mm diameter force main to the Soapberry WTP

- Provision of pumps as follows: 3 pumps each of capacity 200 lps @ 17 m TDH/33 kW

c) Caymanas Gardens Pump Station

- Installation of 1,030m of 300 mm diameter force main to the Soapberry plant

- Provision of pumps as follows: 3 pumps each of capacity 65 lps @ 12 m TDH/11 kW

d) Hamilton Gardens Pump Station

- Installation of 1,290 m of 200 mm diameter force main to the Caymans Garden plant

- Provision of pumps as follows: 2 pumps each of capacity 40 lps @ 18 m TDH/7 kW

The scope described above is to form the basis for the design for the Portmore Sewerage Project.

7.2.3 Operating costs

The financial results of CWTC for the period 2008 to 2011 shows significant losses with an accumulated deficit of J$485,868,152 as at 31 March 2011.

The company suffers significant losses as a result of Bad Debt and foreign exchange loss due to the devaluation of the Jamaican dollar. See the summary results below:

	31 March 2009	31 March 2010	31 March 2011
	$	$	$
Revenue	1,097,295,180	840,000,000	840,000,000
Plant Operating Cost	300,160,643	264,979,987	182,671,927
Other Admin. Cost	22,284,826	43,194,691	44,899,471
Bad Debt	411,724,354	125,570,826	-
Foreign Loss/(Gain)	560,268,267	(38,164,871)	(118,770,000)
Total Operating Cost	**1,294,438,090**	**433,745,504**	**108,801,398**
EBIT DA	**(197,142,910)**	**444,419,367**	**731,198,602**
Interest	(354,529,584)	(359,704,990)	(353,793,630)
Depreciation	(222,814,813)	(180,602,829)	(167,595,544)
Loss before Grants	(774,487,207)	(95,808,452)	209,809,428
Interest Income	4,586,659	-	-
Grant from GOJ	-	169,926,140	-
Profit / (Loss) after Grants[17]	**(769,900,648)**	**74,223,068**	**209,809,428**

In addition to the accumulated deficit of J$485,868,152 as at 31 March 2011; the Company suffers from significant cash flow problems as a result of its only customer failure to settle Invoices on a timely manner.

[17] See Detail Financial Reports at Appendix A-D

7.2.3 Operating costs cont'd

As at March 31, 2011 the total amount receivable from the National Water Commission amounts to $1,468,242,705. This is approximately 53% of the total billing of $2,777,295,180 to them since the commercial Operation Date of March 14, 2008 to March 31, 2011.

The Auditors for CWTC noted in their Report for the period ending March 2010, that the Company's ability to continue as a going concern is dependent on future profitable operations, revenue agreements arrived at with the NWC, the NWC honouring its obligations in a timely manner, and the company obtaining any necessary funding or grants.[18]

[18] Muir Russell Grant Thornton Report –Appendix C

7.2.4 Asset Values

CWTC's 2010 asset value of J$3.4 billion before depreciation comprised the following:

DESCRIPTION	*COST J$*	*Accumulated DEPRECIATION*	*NET BOOK VALUE*
LAND	J$77,008,684	J$-	J$77,008,684
INTANGIBLE ASSETS	J$12,989,241	J$-	J$12,989,241
BUILDING	J$17,863,198	J$1,926,115	J$15,937,083
FURNITURE AND EQUIPMENT	J$29,374,292	J$13,082,023	J$16,292,269
MACHINERY AND EQUIPMENT	J$40,514,109	J$17,157,371	J$23,356,738
SEWAGE PLANT	J$3,232,738,401	J$371,252,132	J$2,861,486,269
Grand Total	J$3,410,987,925	J$403,417,641	J$3,007,070,284

The net book value of J$3,007,070,284 is based on a depreciated actual cost valuation. The depreciated actual/historic cost is not a reliable basis to determine the value of Asset in setting a tariff incorporating ROI. The value can be distorted by several factors such as inflation and foreign exchange movement.

The Audited Financial Statements for CWTC for the period ending March 31, 2008 was reported is United States Dollars as the Project was funded in that currency. The Net Book value at as March 31, 2008 was US$48,257,139[19] or J$4,250,488,803, a difference of over J$1 billion. **(See Section 7.4.7 for ROI calculation)**

7.2.5 Depreciation

Depreciation is an imputed cost introduced to account for capital assets that have a finite life, and to apportion the cost of these assets (which is a legitimate cost of service item) over this useful life.

Depreciation has been estimated on a straight line approach, based on the written down value of assets apportioned over their remaining useful lives as outlined in Figure 2 above.

The Depreciation charge for 2010 amounts to J$180,602,829. It should be noted that depreciation is a non-cash item (at least until the asset needs replacement) and has no impact on cash flows.

[19] Auditors Report for 2008at Appendix A

7.2.6 Interest Expenses

The company has a loan with NCB of US$37 million which was used to assist in the construction of the Plant. The Interest rate is 11.2494% with a repayment date of 2018. The interest cost for the periods 2009 to 2011 are:

- 2009 J$354,529,584
- 2010 J$359,704,990
- 2011 J$353,793,630

The Projected Interest cost for period ending March 2013 is outlined below:

Month	Exchange Rate	Loan Amount ($US)	Loan Amount ($JA)	Interest Rate Mthly 0.93745%
April	87.35	$ 37,000,000.00	$ 3,231,950,000.00	$ 30,297,915.28
May	88.12	$ 37,000,000.00	$ 3,260,440,000.00	$ 30,564,994.78
June	88.70	$ 37,000,000.00	$ 3,281,900,000.00	$ 30,766,171.55
July	89.69	$ 37,000,000.00	$ 3,318,530,000.00	$ 31,109,559.49
August	89.82	$ 37,000,000.00	$ 3,323,340,000.00	$ 31,154,650.83
September	89.93	$ 37,000,000.00	$ 3,327,410,000.00	$ 31,192,805.05
October	91.09	$ 37,000,000.00	$ 3,370,330,000.00	$ 31,595,158.59
November	91.89	$ 37,000,000.00	$ 3,399,930,000.00	$ 31,872,643.79
December	92.97	$ 37,000,000.00	$ 3,439,890,000.00	$ 32,247,248.81
January	93.00	$ 37,000,000.00	$ 3,441,000,000.00	$ 32,257,654.50
February	93.00	$ 37,000,000.00	$ 3,441,000,000.00	$ 32,257,654.50
March	94.00	$ 37,000,000.00	$ 3,478,000,000.00	$ 32,604,511.00
Total				**$ 377,920,968.14**

7.2.7 Weighted Average Cost of Capital (WACC)

The WACC is relevant to this process in that it has been used to determine the return on capital requirement. The Return on Investment is calculated by multiplying the allowed rate-of –return by the CWTC's total Investments base (Rate Base) for the test year. The allowed rate of return is CWTC's Weighted Average Cost of Capital (WACC).

On June 14, 2010, Cabinet considers and approved the transfer of shares from UDC, Ministry of Water and Housing and NHT to the NWC for a nominal value of J$1 each and write-off all loan balances due from CWTC to those entities. [20] This action results in NWC becoming the majority shareholder of CWTC with over 80% of the issued shares,with Astrom being the minority shareholder.

In view of the above CWTC's WACC is estimated to be similar to the cost of Debt which is currently 11.2494% base on the US$37 Million loan from NCB. This assumption is based on the fact that the minority shareholder (Astrom) is a private company and cannot influence dividend policy.

[20] See note 21 of CWTC's Audited Financial Statement for the period ending March 31,2010

7.2.8 Return on Investments (ROI)

The Total Capital Expenditure (CAPEX) on the plant amounts to US$48,257,139 or J$4,250,488,803 as at March 31, 2008. Applying CWTC's WACC of 11.2494% results in ROI of US$5,428,638.59 or J$482,931,688 using exchange rate of J$88.96 to US$1.[21] The elements of the ROI calculations are as follows:

- CAPEX: US$48,257,139
- WACC: 11.2494% (assuming similar to cost of Debt)
- ROI= CAPEX x WACC= US$48,257,139 x11.2494%= **US$5,428,638.59**

7.2.9 Base Revenue Requirement (BRR)

Base Revenue Requirement (BRR)= **operating costs+depreciation+taxes+return on investment .**

The BRR components as per Base Year (March 31, 2010) are as follows:

Description	*Ref.*	*Base Year March 31,2010*
Operating Cost before Interest		*J$433,745,504*
Interest Cost		*J$359,704,990*
Depreciation		*J$180,602,829*
ROI		*J$482,931,6884*
Taxes	*J$482,931,6884/.70*30%*	*J$206,970,723*[22]
Working capital Deficit from previous periods		*J$769,900,648*[23]
Base Revenue Requirement (BRR)		*J$2,433,856,382*

[21] Exchange rate as at Base year :March 31,2010

[22] Assume ROI is after ducting 30% tax (25%plus surtax 55)

[23] Deficit from 2009. See CWTC Audited Financial Statement March 31,2009

7.3 The effect of the Tariff on CWTC

We request the following Tariff measures:

- The rate of J$210.32 per cubic metre ($M^{3)}$ or US$2.24 at current exchange rate of J$94:US$1

- The rate is adjusted in accordance with NWC PAM Factor. This will help the company manage its foreign currency risk.

- The establishment of a Sewage Factor (S factor) account and a mandate for the NWC to lodge all Sewage charges from the areas connect to the CWTC facility. This measure will allow for better management of CWTC receivables and ensure the company remains a viable entity.

The granting of the tariff and the additional measures achieve major outcomes:

- A sustainable financial position for CWTC;
- An appropriate return on capital;
- Achievement of specific performance targets;
- Affordable sewerage charges.

7.3.1 The effect of the Tariff on Customers

In evaluating the effect on Customers, we analyse the current charges of NWC; CWTC's only Customer. The current charges to residential and commercial customers are as follows:

IMPERIAL (4.5461 litre=1Gallon)		
Customer Type	Usage (Gallons)	New Rates per 1,000 Gallons ($)
Residential	For up to 3,000	305.45
	For the next 3,000	538.50
	For the next 3,000	581.43
	For the next 3,000	742.12
	For the next 8,000	924.26
	Over 20,000	1189.70
Commercial	All quantities	1145.39
Condominium	All quantities	568.18
Primary School	All quantities	458.18

7.3.1 The effect of the Tariff on Customers cont'd

We assume that the current charges to NWC customers are based on the Interim Tariff of J$840 Million granted by OUR.

CWTC is seeking a Tariff of J$2,433,856,382 which is an increase of J$1,593,856,382 over the J$840 Million.

The Tariff requested of J$210.32 per cubic metre of sewerage is approximately eighty cents (J$0.80) per gallon. Base on the above a Tariff yielding J$2.4 Billion, with current sewerage flow volume of 11,572,433 cubic metres (2010 Base Year) will result in a charge of J$0.80 per gallon or approximately 18 cents per litre.