

# **REQUEST FOR PROPOSALS**

**RFP No.: BWA/SD/CLAE/12/31/2021**

## **Procurement of Consulting Design and Supervision Services for Sewage Management to Chapman Lane and Environs**

**Client: *Barbados Water Authority***

**Country: *Barbados***

**December 31, 2021**

## **Section 1. Letter of Invitation**

December 31, 2021

Dear Bidders

The Barbados Water Authority (BWA) now invites proposals from suitably qualified consulting firms for the provision of design and construction supervision consulting services for Water Supply and Sewage Management to the Chapman Lane area and environs, located in Bridgetown, Barbados.

Details on the required Services are provided in the included Terms of Reference of this document.

1. This Request For proposal (RFP) includes the following documents:

Section 1 - Letter of Invitation

Section 2 – Background & Instructions to Consultants

Section 3 - Technical Proposal - Standard Forms

Section 5 – Eligible Countries

Section 4 - Financial Proposal - Standard Forms

Section 6 - Corrupt and Fraudulent Practices

Section 7 - Terms of Reference

Appendix 1: Description of Chapman Lane and Environs

2. Details on the proposal's submission date, time and address are provided in Section 2: Background and Instructions to Consultants.

Yours sincerely,

Brian Stuart  
Senior Engineer (Ag)  
Barbados Water Authority

## **Section 2. Background and Instructions to Consultants**

### **Background**

The densely housed areas of Chapman Lane and Emerton Lane are currently not sewerred, although within proximity of the Bridgetown Sewage Treatment Plant (BSTP). Flooding of the area poses a direct threat not only to property, but also to the health of residents as flood waters may contain black water carrying pathogens.

BWA sewer infrastructure exists near to Chapman Lane and Environs, and as such, it may be possible to direct wastewater generated in this area, either by gravity or by using a small lift station to the BSTP for treatment.

The RFP seeks to procure consultants to provide design and construction supervision services for the installation of a potable water supply and sanitary wastewater disposal systems to Chapman Lane and Environs.

### **Instructions To Consultants**

Responses to this RFP shall include one electronic mail version of the document in pdf format with subject line “**Proposal for the Supply of Consulting Services - Water Supply and Sewage Management to Chapman Lane and Environs**” and received by the BWA no later than **February 04, 2022, at 6:00 PM (local time)**. The proposals should be addressed to:

**The Chairman  
Tenders Committee  
Barbados Water Authority  
Email: [bwatenders.committee@bwa.gov.bb](mailto:bwatenders.committee@bwa.gov.bb)**

**Subject: RFP – Water Supply and Sewage Management to Chapman Lane and Environs**

**Interested firms should confirm their intention to respond to the RFP by sending a confirmation email to [projectoffice@bwa.gov.bb](mailto:projectoffice@bwa.gov.bb), on or before January 14, 2022 to receive details of planned site visits.**

**3.1** Proposers shall be solely and exclusively responsible for all costs incurred in connection with the preparation and submission of the proposals; demonstrations, interviews; preparation of responses to questions and requests for additional information; for contract discussions; or for anything in any way related to this RFP. BWA is not liable for any costs incurred by a Proposer in response to this RFP.

**3.3** BWA reserves the right to reject any and all proposals received as a result of this RFP. The award of a contract will not be based on any single factor, nor will it be based solely

or exclusively on the lowest cost proposal. If a contract is awarded, it will be awarded to the Proposer, who in the judgment of the BWA has presented an optimal balance of relevant experience, technical expertise, price, quality of service, work history and other factors which the BWA may consider relevant and important in determining the best Proposal.

**3.4** The BWA reserves the right to cancel or modify this RFP. There is no guarantee that the BWA will award a contract.

**3.5** The BWA reserves the right to investigate the qualifications of any Proposer under consideration, including proposed subcontractors and parties otherwise related to the Proposer and require confirmation of information furnished by a Proposer or require additional evidence of experience and qualifications to provide the services or otherwise discharge the obligations required by this RFP.

**3.6** Proposals submitted will be treated as confidential.

**3.7** The BWA reserves the right to approve or disapprove of subcontractors, joint venture partners, or other proposed team members.

**3.8** The BWA reserves the right to evaluate responses in terms of the best interests of the BWA, applying criteria provided in this RFP and any other criteria the BWA, in its sole discretion, deems pertinent.

**3.9** By the submission of a proposal, each Proposer accepts and agrees to execute a Contract with the BWA, inclusive of terms and conditions relating to indemnification, required insurance and standard of care requirements.

**3.10** All proposals must remain valid for a minimum period of ninety (90) calendar days from the date of submission.

**3.11** Proposers may withdraw their Proposal before the Submission Deadline.

### **Contract Administration**

**3.12** BWA will assign a representative as the project manager and contract administrator on behalf of the BWA.

### **Requests for Information and Addenda**

**3.13** All questions or requests for clarification shall be submitted via email to Mr Brian Stuart at [brian.stuart@bwa.gov.bb](mailto:brian.stuart@bwa.gov.bb), on or before 4:30 p.m. on Thursday, January 21, 2022. BWA will prepare written responses to all RFI's received, and the responses will be emailed to all firms that indicated their intention to participate in the tender.

**3.14** If it becomes necessary to revise any part of this RFP, an addendum will be prepared and issued via email to all Consultants on the RFP email list.

**3.15 BWA will conduct a tour of the proposed sites** at a time to be communicated to the bidders who confirm their participation in the RFP as **stipulated in 3.13. The anticipated date for the tour is January 18, 2022 at 9:30 am.**

### **Proposer's Responsibilities**

**3.16** It is presumed that each Proposer has read the RFP and is thoroughly familiar with the scope of services to be performed.

**3.17** The Proposer agrees that if a contract is awarded to a Proposer, the Proposer shall make no claim against the BWA because of any estimate or statement made by any employees, agents, or consultants of the BWA which may prove to be erroneous in any respect.

**3.18** Upon completion of the evaluation process, one Proposer will be selected for negotiations. If negotiations are successfully completed, the Proposer will be required to enter into a contract arrangement with the Barbados Water Authority for the provision of the services.

## Section 3. Technical Proposal – Standard Forms

### Form Tech -1 – Technical Proposal Submission Form

{Location, Date}

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To: [Name and address of BWA]

Dear Sirs:

We, the undersigned, offer to provide the consulting services for [Insert title of assignment] in accordance with your Request for Proposals dated [Insert Date] and our Proposal.

We are hereby submitting our Proposal, which includes this Technical and Financial Proposal.

*{Note to Consultant: If the Consultant is a Joint Venture (JV), insert the following: “We are submitting our Proposal in association/as a consortium/as a Joint Venture with: {Insert a list with full name and the legal address of each member, and indicate the lead member}. We have attached a copy [insert: “of our letter of intent to form a Joint Venture” or, if a JV is already formed, “of the Joint Venture agreement”] signed by every participating member, which details the likely legal structure of and the confirmation of joint and severable liability of the members of the said joint venture.*

**OR**

*If Consultant’s Proposal includes Sub-consultants, insert the following: “We are submitting our Proposal with the following firms as Sub-consultants: {Insert a list with full name and address of each Sub-Consultant.}*

We hereby declare that:

- a) All the information and statements made in this Proposal are true and we accept that any misinterpretation or misrepresentation contained in this Proposal may lead to our disqualification by the BWA and/or may be sanctioned by the BWA.
- b) Our Proposal shall be valid and remain binding upon us for a period of ninety days from the date of submission of the proposal.
- c) We confirm our understanding of our obligation to abide by the BWA’s policy regarding corrupt and fraudulent practices.
- d) We undertake to negotiate a Contract on the basis of the proposed Key Experts. We accept that the substitution of Key Experts may lead to the termination of Contract negotiations.

- e) Our Proposal is binding upon us and subject to any modifications resulting from the Contract negotiations.

We undertake, if our Proposal is accepted and the Contract is signed, to initiate the Services related to the assignment as per BWA's requirements.

We understand that the BWA is not bound to accept any Proposal that the BWA receives.

We remain,

Yours sincerely,

Authorized Signature {In full and initials}: \_\_\_\_\_

Name and Title of Signatory: \_\_\_\_\_

Name of Consultant (company's name or JV's name):

In the capacity of: \_\_\_\_\_

Address: \_\_\_\_\_

Contact information (phone and e-mail): \_\_\_\_\_

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{For a Joint Venture, either all members shall sign or only the lead member, in which case the power of attorney to sign on behalf of all members shall be attached}



## FORM TECH-2

### CONSULTANT'S ORGANISATION AND EXPERIENCE

Form TECH-2: a brief description of the Consultant's organisation and an outline of the recent experience of the Consultant that is most relevant to the assignment. In the case of a joint venture, information on similar assignments shall be provided for each partner. For each assignment, the outline should indicate the names of the Consultant's Key Experts and Sub-consultants who participated, the duration of the assignment, the contract amount (total and, if it was done in a form of a joint venture or a sub-consultancy, the amount paid to the Consultant), and the Consultant's role/involvement.

#### A - Consultant's Organisation

1. Provide here a brief description of the background and organisation of your company, and – in case of a Joint Venture – of each member for this assignment.
2. Include organisational chart, a list of Board of Directors and beneficial ownership.

#### B - Consultant's Experience

1. List only previous similar assignments successfully completed in the last [*insert number*] years.
2. List only those assignments for which the Consultant was legally contracted as a company or was a member of a Joint Venture. Assignments completed by the Consultant's individual Experts working privately or through other consulting firms cannot be claimed as the relevant experience of the Consultant, or that of the Consultant's partners or sub-consultants, but can be claimed by the Experts themselves in their CVs. The Consultant should be prepared to substantiate the claimed experience by presenting copies of relevant documents and references if so requested by the BWA.

Duration	Assignment Name and Brief Description of Main Deliverables/Outputs	Name of Bank and Country of Assignment	Approx. Contract Value (in US\$ or EURO)/Amount Paid to Your Firm	Role on the Assignment
{e.g. Jan.2009–Apr.2010}	{e.g. "Improvement quality of.....": designed master plan for rationalization of .....; }	{e.g. Ministry of ....., country}	{e.g. US\$1 million/ US\$0.5 million}	{e.g. Lead partner in a JV A&B&C}
{e.g. Jan-May 2008}	{e.g. "Support to sub-national government....." : drafted secondary level regulations on.....}	{e.g. municipality of....., country}	{e.g. US\$0.2 million/ US\$0.2 million}	{e.g. sole Consultant}

**FORM TECH-3 (NOT REQUIRED FOR THIS RFP)**

**FORM TECH-4**

**Description of the Approach, Methodology and Work Plan**

Proposers shall provide a description of the approach, methodology and work plan for performing the assignment, including a detailed description of the proposed methodology and staffing for training, if the Terms of Reference (TOR) specify training as a specific component of the assignment. Suggested structure of the proposal is as follows:

- (a) Technical Approach and Methodology
- (b) Work Plan
- (c) Organisation and Staffing

- (a) **Technical Approach and Methodology:** {Please explain your understanding of the objectives of the assignment as outlined in the TOR, the technical approach and the methodology you would adopt for implementing the tasks to deliver the expected output(s), and the degree of detail of such output.
- (b) **Work Plan:** {Please outline the plan for the implementation of the main activities/tasks of the assignment, their content and duration, phasing and interrelations, milestones (including interim approvals by the BWA), and tentative delivery dates of the reports. The proposed work plan should be consistent with the technical approach and methodology, showing your understanding of the TOR and ability to translate them into a feasible working plan. A list of the final documents (including reports) to be delivered as final output(s) should be included here. The work plan should be consistent with the Work Schedule Form.}
- (c) **Organisation and Staffing:** {Please describe the structure and composition of your team, including the list of the Key Experts, Non-Key Experts and relevant technical and administrative support staff.}. **Four Key Experts must be identified for evaluation.**

## Form Tech 5. Work Schedule and Planning for Deliverables

Table 1 Work Schedule and Planning for Deliverables

N°	Deliverables <sup>1</sup> (D-..)	Months											
		1	2	3	4	5	6	7	8	9	....	n	TOTAL
<b>D-1</b>	<i>{e.g. Deliverable #1: Report A</i>												
	<i>1) data collection</i>												
	<i>2) drafting</i>												
	<i>3) inception report</i>												
	<i>4) incorporating comments</i>												
	<i>5) .....</i>												
	<i>6) delivery of final report to BWA}</i>												
<b>D-2</b>	<i>{e.g. Deliverable #2:.....}</i>												
<b>n</b>													

1. List the deliverables with the breakdown for activities required to produce them and other benchmarks such as the BWA's approvals.  
For phased assignments indicate the activities, delivery of reports, and benchmarks separately for each phase.
2. Duration of activities shall be indicated in form of a bar chart.
3. Include a legend, if necessary, to help reading the chart.

## Form Tech 6. Team Composition, Assignment and Key Experts' Inputs

Table 2: Team Composition, Assignment and Key Experts' Inputs

N°	Name	Expert's Input (in person/month/person-days) per each Deliverable (listed in TECH-5)										Total Time Input (in months/days)			
		Position		D-1		D-2		D-3	.....	D-...			Home	Field	Total
<b>KEY EXPERTS</b>															
K-1	{e.g. Mr. Abbbb}	[Team Leader]	[Home]	[2 month]	[1.0]	[1.0]							4		
			[Field]	[0.5 m]	[2.5]	[0]									3
K-2															
K-3															
n															
										<b>Subtotal</b>					
<b>NON-KEY EXPERTS</b>															
N-1			[Home]												
			[Field]												
N-2															
n															
										<b>Subtotal</b>					
										<b>Total</b>					

For Key Experts the input should be indicated individually for the same positions as required under the Data Sheet ITC21.1.

2. Months are counted from the start of the assignment/mobilization. One (1) month equals 22 working (billable) days. One (1) working (billable) day shall be not less than eight (8) working hours.
3. "Home" means work in the office in the expert's country of residence. "Field" work means work carried out in the BWA's country or any other country outside the expert's country of residence.

Full time input
  Part time input

## Form Tech-6 Cont'd. - Curriculum Vitae

Curriculum Vitae for Key Personnel shall be provided in the following format.

### CURRICULUM VITAE

<b>Position Title and No.</b>	<i>{e.g. K-1, TEAM LEADER}</i>
<b>Name of Expert:</b>	<i>{Insert full name}</i>
<b>Date of Birth:</b>	<i>{day/month/year}</i>
<b>Country of Citizenship/Residence</b>	

**Education:** {List college/university or other specialized education, giving names of educational institutions, dates attended, degree(s)/diploma(s) obtained}

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**Employment record relevant to the assignment:** {Starting with present position, list in reverse order. Please provide dates, name of employing organisation, titles of positions held, types of activities performed and location of the assignment, contact information of previous BWAs and employing organisation(s) who can be contacted for references. Past employment which is not relevant to the assignment does not need to be included. }

<b>Period</b>	<b>Employing Organisation and your Title/Position. Contact Information for References</b>	<b>Country</b>	<b>Summary of Activities Performed Relevant to the Assignment</b>
<i>[e.g. May 2005-present]</i>	<i>[e.g. Ministry of ....., Advisor/Consultant to...  For references: Tel...../e-mail; Mr. Hbbbb, Deputy Minister]</i>		

**Membership in Professional Associations and Publications:**

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**Language Skills (indicate only languages in which you can work):** \_\_\_\_\_

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**Adequacy for the Assignment:**

Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
<i>{List all deliverables/tasks as in TECH- 5 in which the Expert will be involved }</i>	

**Expert's Contact Information:** (e-mail....., phone.....)

**Certification:**

I, the undersigned, certify that to the best of my knowledge and belief, this Curriculum Vitae correctly describes myself, my qualifications, and my experience, and I am available to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the BWA, and/or sanctions by the BWA.

{day/month/year}

\_\_\_\_\_  
Name of Expert

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

{day/month/year}

\_\_\_\_\_  
Name of authorized  
Representative of the Consultant  
(same who signs the Proposal)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## Section 4. Financial Proposal - Standard Forms

### FORM FIN-1 FINANCIAL PROPOSAL SUBMISSION FORM

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To: [Name and Address of BWA] [Location, Date]

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Dear Sirs:

We, the undersigned, offer to provide the consulting services for [Insert Title of Assignment] in accordance with your Request for Proposal dated [Insert Date] and our Technical Proposal.

Our attached Financial Proposal is for the amount of [Indicate the corresponding amount(s) currency(ies)] [Insert amount(s) in words and figures], **inclusive of VAT**.

*{Note to Consultant: All amounts shall be the same as in Form FIN-2}.*

Our Financial Proposal shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Proposal.

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We understand you are not bound to accept any Proposal you receive.

Yours sincerely,

Authorized Signature {In full and initials}: \_\_\_\_\_

Name and Title of Signatory: \_\_\_\_\_

In the capacity of: \_\_\_\_\_

Address: \_\_\_\_\_

E-mail: \_\_\_\_\_

*{Note to Consultant: For a Joint Venture, either all members shall sign or only the lead member/consultant, in which case the power of attorney to sign on behalf of all members shall be attached.}*

## FORM FIN-2 SUMMARY OF COSTS

Item	Cost (BDS)
<b>Cost of the Financial Proposal</b>	
Including:	
(1) <b>Remuneration</b>	
(2) [ <i>Reimbursables</i> ]	
<b><u>Total Cost of the Financial Proposal:</u></b> <i>{Should match the amount in Form FIN-1}</i>	
(i) <i>{insert type of tax e.g., VAT or sales tax}</i>	
(ii) <i>{e.g., income tax on non-resident experts}</i>	
(iii) <i>{insert type of tax}</i>	
<b><u>Total Estimate for Indirect Local Tax:</u></b> _____	



## FORM FIN-3 BREAKDOWN OF REMUNERATION

The information to be provided in this Form shall only be used to demonstrate the basis for the calculation of the Contract's ceiling amount; to calculate applicable taxes at contract negotiations; and, if needed, to establish payments to the Consultant for possible additional services requested by the BWA. **This Form shall not be used as a basis for payments under Lump-Sum contracts**

No.	Name <sup>2</sup>	Position (as in TECH-6)	Person- months/Person- days Remuneration Rate <sup>4</sup>	Time Input in Person- months/Person- -days (from TECH-6)	{ Currency # 1- as in FIN-2 }
	<b>Key Experts</b>				
K-1			[Home]		
			[Field]		
K-2					
	<b>Non-Key Experts</b>				
N-1			[Home]		
N-2			[Field]		
	Total Costs				

## FORM FIN-4 BREAKDOWN OF REIMBURSABLE EXPENSES

The information to be provided in this Form shall only be used to demonstrate the basis for calculation of the Contract ceiling amount, to calculate applicable taxes at contract negotiations and, if needed to establish payments to the Consultant for possible additional services requested by the BWA. This Form shall not be used as a basis for payments under Lump-Sum Contracts.

N°	Type of [Reimbursable Expenses]	Unit	Unit Cost	Quantity	{Currency # 1- as in FIN-2}
—	<i>{e.g., Per diem Allowances*}</i>	{Night}		_____	
—	<i>{e.g., International Flights}</i>	{Ticket}		_____	
—	<i>{e.g., In/Out Airport Transportation}</i>	{Trip}			
	<i>{e.g., Communication Costs between {Insert place} and {Insert place}}</i>				_____
	<i>{ e.g., Reproduction of Reports}</i>				_____
	<i>{e.g., Office Rent}</i>				_____
	.....				_____
	<i>{Training of the BWA's Personnel – if required in Terms of Reference}</i>				_____
<b>Total Costs</b>					

## **Section 5 – Eligible Countries**

1. This section is not applicable for this assignment.

## **Section 6. Corrupt and Fraudulent Practices**

2. BWA's operations must always comply with high standards to avoid the negative repercussions of corruption, using as a premise its adherence to the fundamental values of integrity, transparency and accountability. BWA operations must always be carried out within the framework of full compliance with the policies and principles for the prevention and detection of money laundering that govern the officials as well as persons contracted to carry out their activities.
3. BWA will reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the contract in question.

## **Section 7. Terms of Reference**

### **Procurement of Consulting Design and Supervision Services Water Supply and Sewage Management to Chapman Lane and Environs**

#### **1. BACKGROUND**

Chapman Lane, in the City of Bridgetown, although within proximity to the Bridgetown Sewage Treatment Plant, remains unsewered. Additionally, unsanctioned development have resulted in the erection of structures that are without a BWA approved water supply and adequate sanitary facilities. This, in addition to improper disposal of wastewater presents an environmental and public health concern.

The RFP seeks to procure consultants to provide design and construction supervision services for the installation of a sanitary wastewater disposal system in Chapman Lane area and its Environs.

#### **2. OBJECTIVE OF THE CONSULTANCY**

##### **General Objective**

1. The main goal of this consultancy is to provide consulting engineering design and construction supervision services that will facilitate the installation of potable water mains, and water borne facilities to houses where needed, and the installation of sanitary sewage collection system that connects to the existing Bridgetown Sewage Treatment Plant within the Chapman Lane area and its environs.

##### **Specific Objectives**

1. To conduct surveys to determine the quantity and types of existing sanitary facilities and conduct an aerial survey and topographical survey to facilitate the production of existing layout drawings of the houses, to facilitate design of the sewer system.
2. To produce designs and tender documents, estimated construction costs and an Environmental and Social Management and Monitoring Plan (ESMMP), for the installation of a sewer network that connects to the existing Bridgetown sewer network system.

3. To provide engineering advisory services during the tender process.
4. To provide construction supervision services during the construction phase of the project.

To deliver the specific objectives, the Consulting Firm will undertake all necessary activities, which will include, as a minimum, the tasks outlined in section 3.

### **3. SCOPE OF SERVICES**

The Consulting Firm will carry out the following tasks outlined to achieve the overall goals and objectives of this project.

#### **Conduct Surveys**

1. The Consulting Firm will coordinate with the BWA and other stakeholder agencies to visit the site to obtain all on the ground information and will coordinate the physical surveys for obtaining all information necessary to complete the required designs. The information should at a minimum include; the number of houses and existing sanitary facilities and an estimate of the flows for each location to determine design capacities for the sewerage system. The survey must also identify houses that require the installation of water-borne facilities. Information on any previously conducted social surveys will be provided to the consultants.
2. The Consulting Firm will coordinate the necessary aerial surveys to facilitate generation of digital layout drawings depicting the layout of the various houses, and layout of sanitary sewer collection system. The consultant will also coordinate any topographical surveys needed to finalise the sewerage collection design and connection of new sewerage pipes to the existing Bridgetown Sewer network. The cost for all surveys should be included in the proposals as reimbursable costs.

#### **Preparation of Designs, Bidding Documents and Deliverables**

1. The Consulting Firm shall provide a service of the highest quality, consistent with current engineering and professional local and/or international standards, resulting in scope of works, final designs, specifications and bidding documents for the works.
2. In preparing the design documents the Consulting firm shall consider the following:
  - a. Low lying areas where the installation of pumps is required to pump wastewater for adequate disposal shall be identified, and shall include the design of any lift station required to transfer wastewater flows to the Bridgetown Sewage Treatment Plant.
  - b. The importance of maintaining existing services to the residents during the construction process.

- c. The design of a water reticulation plan (inclusive of adequately sized mains and appurtenances) for the supply of potable water to dwellings, without such a supply, within the identified areas.
3. The consultant shall prepare an estimated construction cost to include the following:
  - a. The installations of the potable water reticulation/distribution system where necessary.
  - b. The installation of the sanitary sewage collection system and its connection to the existing Bridgetown Sewer network.
  - c. The placement of manholes, junction boxes, etc to cater for the future development of houses currently without water borne facilities
4. In preparing the bidding documents the Consulting Firm shall consider the following:
  - a. Appropriate materials, standards and technology shall be always used.
  - b. BWA standard specifications for pipework to be utilised.
  - c. The Outline Execution Schedule for the works should consider vehicular and pedestrian access at all times.
    - a. A risk analysis of impacts to residents due to the construction and refurbishment works to be conducted and mitigation measures identified and presented in an ESMMP.

### **Provide Advisory Services**

5. The consulting firm will assist with providing responses and addenda during the bidding period and with the evaluation of the proposals received. The consultant will also provide a recommendation for award of contract.

### **Construction Supervision**

6. The Consulting Firm shall be responsible for the supervision, of all the construction works associated with the project.
7. The Consulting Firm shall be responsible for ensuring that the milestones associated with all deliverables are on time and within budget for the Contracting Firm(s) carrying out the construction works.
8. The Consulting Firm shall also be primarily responsible for facilitating the inspection of all works as required and the submission of all required reports on data compiled during inspection, including those related to the ESMMP, assuming no assistance from BWA staff.
9. The Consulting firm will be responsible for ensuring that as-built drawings are created for the new sewage disposal and potable water installation.

## **Task 1: Design and Advisory services**

### **Procurement of Consulting Design and Supervision Services Water Supply and Sewage Management to Chapman Lane and Environs**

#### **TASK 1.1: Preparation of preliminary designs**

Review all available documentation, drawings, and resources available from the BWA, and after conducting site visits and inspections, the Consulting Firm shall:

1. Submit an Inception Report within twenty-one (21) days after signing the contract that will include:
  - a. The initial findings.
  - b. A detailed work schedule and methodology for the Consulting Firm to complete the designs, including the schedule, and scope of all surveys, investigations, tests, and any other studies or surveys to be conducted.
  - c. A programme for the use of the Consulting Firm's resources including personnel, equipment, and materials.
2. Conduct detailed site studies and any required tests as necessary, to determine the condition of the facilities and the extent of the required scope of works.
3. Prepare preliminary design drawings and scope of works.
4. Prepare all documents necessary for obtaining regulatory approvals.
5. Submit the Scope of Works for the work site, as well as a full set of the preliminary drawings to established industry standards on an electronic storage device (flash drive or external hard drive) as well as a set of signed and sealed drawings for review and comment by the BWA.
6. Submit a Preliminary Report to BWA which includes the following:
  - a. A detailed engineering assessment, preliminary designs, scope of works and any other information in relation to:
    - i. Risk analysis and mitigation strategies
    - ii. Suggested construction methods and industry best practices including recommendations of materials to be used and specifications for all materials to be used at all locations based on site conditions
    - iii. A plan for any demolition or materials to be carried off site including risk analysis and mitigation strategies.

- iv. Risk analysis and mitigation strategies for issues with regards to water service continuity.
- b. Preliminary Bill of Quantities based on preliminary design and developed scope of works at all locations.
  - a. A preliminary Schedule in Gantt Chart format.

**DELIVERABLES:**

- 1. INCEPTION REPORT (21 days after signing of contract)**
- 2. TECHNICAL MEMORANDUM: Preliminary Report on the designs and scope of works: (Duration to be proposed by consulting firm)**

**TASK 1.2: Draft Final Detailed Designs and Detailed Scope of Works**

1. Upon the approval of the preliminary designs and detailed scope of works by the BWA, the Consulting Firm shall prepare detailed construction drawings in accordance with the National Building Standards of Barbados and established industry best practices.
2. The Consulting Firm shall submit a full set of engineering certified signed and sealed detailed construction drawings and detailed scope of works inclusive of all recommended specifications and construction methods in accordance with the National Building Standards of Barbados and established industry best practices.
3. Submit a Draft Detailed Design Report which includes the following:
  - a. Rationale for the Final Detailed Design with respect to the works for the installation of the sewage disposal system.
  - b. Detailed Scope of Works, Technical Specifications, Construction Methods and Materials for each site location.
  - c. Bill of Quantities based on Detailed Design and Scope of Works for all locations inclusive of any relocation or removal costs and costs related to environmental and social impact mitigation, temporary water supply or storage and commissioning or re-commissioning of equipment of facilities.
  - d. Safety Plan which addresses all perceived areas of concern and that is compliant with the Barbados Health and Safety Regulations for each location.
  - e. Risk Analysis and ESMMP to reduce impacts due to the repair activities and to minimise disruptions to the water supply service, including the identification of the parties responsible for each mitigation component.
  - f. Schedule in Gantt Chart format which incorporates the following:



- g. An opinion of probable cost of the project

**Duration:** To be provided by the Consulting firm. (BWA will complete review in two weeks)

**DELIVERABLES:**

**1. TECHNICAL MEMORANDUM Draft Final Designs and Detailed Scope of Works:**

- a. Four (4) sets of detailed design drawings in hardcopy- size D on bond paper and in AutoCAD format and pdf on an electronic storage device.
- b. Draft Detailed Design report in hardcopy and electronic format inclusive of:
  - i. Draft design rationale.
  - ii. Draft Technical Specifications for Construction Methods and Materials.
  - iii. Draft Bill of Quantities in hardcopy and electronic format.
  - iv. Draft Safety Plan for all site locations.
  - v. Draft Risk Analysis and ESMMP.
  - vi. Draft Schedule in Gantt Chart Format (indicating the Critical Path of project activities) which considers commissioning of new sewage facilities, and mitigation and disruption of water supply and sanitary services to the affected residents.

**TASK 1.3: Final Detailed Design and Detailed Scope of Works**

After final review comments are received from the BWA and changes incorporated into the draft documentation, the Consulting Firm shall deliver the Final Detailed Design package.

**Duration:** To be provided by the consulting firm. (BWA will complete review within two weeks.)

**DELIVERABLES: TECHNICAL MEMORANDUM: Final Detailed Design and Scope of Works:**

- a. A complete set of drawings in the following format:
  - i. Four (4) sets of size D drawings in bond paper comprised of one set for the BWA's records and the others as construction drawings for the Contracting Firms to be selected to carry out the works.
  - ii. A set of size D drawings in reproducible media.
  - iii. An electronic storage device containing all the final AutoCAD drawings and all the files.
- b. A set of technical specifications for construction methods and materials to be used
- c. An action plan for minimizing water outages and maintaining water quality where anticipated.

- d. A printout of the list of Quantities and Cost Estimates (Bill of Quantities) and the MS Excel file containing these spread sheets.
- e. Final Safety Management Plan for each site location.
- f. Final Risk Analysis and ESMMP for each site location inclusive of all costs
- g. Final Master Progress Schedule inclusive of any demolition schedules, the procurement shipping lead time of materials or goods, the work required at each site and the commissioning and re-commissioning of equipment or facilities which takes into account mitigation and disruption of water supply service to the affected population.

**TASK 1.4: Engineering Advisory Services.**

During the bidding period, the Consulting Firm shall provide the following engineering advisory services:

- a. Technical Assistance in the preparation of the Bidding Documents.
- b. All the work that is required to review and provide technical clarity to Bid queries.
- c. All the work that is required to review and evaluate the means and methods of construction proposed by the contractor(s) including Alternate Proposals and advise the BWA if there is reasonable belief that such proposed means and methods of construction will not produce finished work in accordance with the contract.
- d. All the work that is required to review the bid proposals.

**Duration: 3 months (discontinuous)**

**DELIVERABLES:**

The following will constitute the deliverable(s):

- a. A bid package that includes the Scope of Works, designs, drawings, Bill of Quantities, procedures, and technical specifications.
- b. Technical responses to Bid queries.
- c. A report on the analysis of bid proposals and findings inclusive of recommendations of alternate proposals.

## **Task 2: Construction Supervisions Services**

### **Procurement of Consulting Design and Supervision Services Water Supply and Sewage Management to Chapman Lane and Environs**

#### **TASK 2.1: Planning and Initiation**

During the Planning and Initiation Phase the Consulting Firm is expected to carry out the following activities:

1. A review of the Master Progress Schedule(s) provided by the contracted firm(s) engaged for the work.
2. Develop Final Cost Estimates based on the Contractor's Proposal in the Bid Documents.
3. A review of the requirements for mobilisation the Contracting Firms as identified in the Work Plans provided.
4. Develop criteria for measuring the performance of the contracted firm(s) engaged for completing the works.
5. Liaising with the project implementation team to brief all parties on their required roles and to setup mechanisms of communication and schedule weekly and monthly review meetings.
6. Update the Master Progress Schedule indicating the new timeline for each aspect of the scope of works as needed.  
Ensure that required licenses, approvals or permits for the works are obtained.
7. Stakeholder Consultation
  - a. A minimum of three (3) meetings should be held with Barbados Water Authority Staff and outside agencies prior to the start of the contracts to review all issues and develop mitigation strategies for addressing any issues therein identified.
  - b. Meetings should also be held with communities and any owners whose property will be affected by the works.
8. Chair meetings, record, prepare and distribute all minutes.
9. Prepare a report comprised of the Mitigation Strategies devised for the sites.

**Duration: 1 month (discontinuous)**

#### **DELIVERABLES:**

1. A report on the review of the Work plan submitted by the Contractor(s).
2. Overall Project Schedule for the projects to include performance criteria and milestones for the Contractor(s).

3. Minutes of the meetings held with Stakeholders of the project and a summary report with recommended mitigation strategies for addressing issues, their implementation, and monitoring of their effectiveness.

## **TASK 2.2: Monitoring & Evaluation**

The Consulting Firm shall carry out Monitoring and Evaluation (M&E) for the works to be carried out by the Contracting Firms which shall include the following activities identified in the General Project Management areas.

### **1. Scope**

- a. All the work required to supervise the performance of all detailed inspection and field-testing of materials and items of work, quality control tests, or any other tests required by the construction contracts, to ensure that such tests are performed in a satisfactory and timely fashion.
- b. All the work that is required to review the adequacy of the personnel and equipment of the contractor(s) and the availability of necessary materials and supplies including labour, equipment, and material to ensure compliance with the Master Progress Schedule. These records will subsequently be used to prepare the Contract Cost Summary/Close - Out Report.
- c. All the work required to maintain accurate, orderly, and detailed construction (as-built) drawings, change orders, supplemental drawings, and all other project-related documents.
- d. All the work required to ensure that the ESMMP is properly implemented, and the negative impact of the construction is minimised.

### **2. Schedule & Timeline**

- a. All the work required to review and monitor compliance of the Contracting Firms with the Master Progress Schedule and any associated updates submitted by the contractor(s), including direct revisions to the Master Progress Schedule as required by the BWA.
- b. All the work required to make recommendations to the BWA regarding approval or disapproval of the updated Master Progress Schedule including notification of any anticipated delays as well as recommendations as to what methods should be adopted to make up for lost time if the performance of the work by the contractor(s) falls behind the Master Progress Schedule.
- c. Conduct weekly meetings with the BWA implementation team and the contracted firms to review and assess the current state of implementation activities and administer minor issues which may arise.

- d. Chair all meetings, record, and prepare all minutes (which focus on Decisions Made, Outstanding Actions and Issues).
- e. Offer guidance to the BWA implementation team where applicable.
- f. Review and comment on all progress reports prepared by the Contracted Firm(s) providing services under the construction and refurbishment programme.
- g. Provide feedback to the Project Management Office regarding the status of the implementation outlining any issues identified and recommending solutions where applicable.
- h. Ensure that any delays are both documented in detail and minimised where possible and report on the effect of these with regard to the scope, time and cost on project completion. Any changes in the schedule should be approved through change orders and validated by the stakeholders.

### **3. Quality Assurance and Inspection of Works**

- a. All the work required to inspect the project in conjunction with the BWA's representatives on a periodic basis and prior to Substantial Completion or Final Acceptance of work.
- b. Provide Inspectors to inspect the works on a daily basis and ensure all works are done in accordance with contract documents, design drawings and specifications.
- c. Complete daily inspection reports and correspondence.
- d. Take construction photographs showing the progress of works and any unique circumstances which may arise and submit in the monthly progress report during the project in the format of a Construction Photography Log. Progress photos shall also be included in the monthly report.
- e. Ensure that all quality standards are maintained by adherence to the technical specifications that were provided as a part of the deliverable – Technical Memorandum – Final Detailed Design and Scope of Works.
- f. Provide any other inspection activities or items necessary to successfully complete the work.
- g. Carry out pre-condition surveys, including photographs of all buildings in the direct vicinity of the works in any areas where excavation works, and related equipment may cause heavy vibrations as well as property boundaries along the alignment of access roads.
- h. Ensure that mitigation measures are carried out according to plan and record lessons learnt.

### **4. Safety**

- a. Review and provide feedback on the safe work plans of Contractor(s).
- b. Ensure that all local and international regulations are followed by the Contracted firm(s) with respect to construction practices and safety practices (the Factories Act

and the Occupational Health and Safety Act, Government of Barbados). Also, that the safety and regulation of both vehicle and pedestrian traffic is managed as specified by the laws of Barbados where applicable.

- c. Ensure that personnel operating equipment are licensed to operate.
- d. Ensure that personnel on site are wearing the required Personal Protective Equipment (PPE), which at the minimum shall include a hard hat, steel toe boots, safety glasses, gloves and a reflective vest where necessary.
- e. Ensure that the contractor carries out regular and timely safety briefing of all staff.

## **5. Cost/ Procurement**

- a. All the work required to verify all payments for work performed for payment purposes.
- b. Review the progress of implementation to ensure that the works are being provided in the most efficient and cost-effective manner with regards to:
  - i. The procurement of equipment and their timing. (The Master Schedule should include procurement and the equipment lead time).
  - ii. The use of all construction materials and supplies.

## **6. Communications**

- a. All communication on the construction, refurbishment and commissioning works for each site shall be submitted to the Project Management Office at least two (2) weeks in advance of their requirement to notify the public in order to facilitate reasonable processing time.

**Duration:** Based on the contractor's submissions.

**DELIVERABLES:**

### **1. Minutes of the weekly meetings held with the implementation team.**

### **2. Weekly site diary that tracks all activities which occurred on the project on a daily basis, including:**

- a. All the work accomplished weather conditions, decisions reached, specific site problems encountered, general and specific observations, safety issues and all other pertinent data relevant to the performance of the construction contract(s) - to be kept updated during the execution and submitted at the end of the project in portable document format (pdf).

### **3. Monthly progress reports detailing, as a minimum:**

- a. The work of the contractor(s)
- b. Description of the status of the works

- c. Work executed vs work planned
- d. The number and amount of change orders
- e. An update of the budget for the Project, including a comparison of the original budget with current disbursements and the estimated cost to complete.
- f. The performance of the project with regards to milestones, the schedule & timeline, quality assurance and inspection of works, cost/procurement, communications, problems encountered, lessons learnt, and successes achieved.

**TASK 2.3: Post – Preparation of Base Plan**

1. Perform a survey using accurate survey or GPS equipment of the sites and access roads.
2. Prepare digital base plans showing all survey pickup in a neat readable manner.
3. Transfer all as-built construction survey information (whether hardcopy or electronic) collected onto the electronic plans provided in Task 1.3 Final Detailed Design.
4. Submit full set of as-built drawings to the BWA’s drafting standards on CD, flash drive or external hard drive after final approval

**Duration: Two (2) months (discontinuous)**

**DELIVERABLES:**

1. Provision of a Legal Base Plan inclusive of updates to the following materials provided as Task 1.3
  - a. A set of size D drawings in bond paper
  - b. A set of size D drawings in reproducible media
  - c. An electronic storage device (flash or external hard drive) containing all the final AutoCAD drawings (and/or GPS data) and all the files.

**TASK 2.4: Project Close-Out/Termination**

The consulting firm shall carry out the following activities:

1. All the work that is required to provide a summary description of the actual versus original contract duration/schedule and spend, including mobilization.
2. All the work required to provide a summary description of all change orders and large overruns with regards to time.
3. All the work required to record or supervise the creation of (“as-built”) drawings, GIS updates and updates to the Asset Management System.

4. Final review of overall project implementation with respect to the performance of the Contracting Firms on the projects with regards to the standards set out in supervision of the works. The review should also summarise the lessons learnt, project successes and all issues reported during project implementation and their status.
5. Review of the physical condition of all sites to ensure that the contractors have finished the works according to the requirements of BWA, as established in their contracts; and that the infrastructures are working properly.
6. Review of the physical condition of all sites to ensure that the contractor removes all equipment, materials and temporary structures required for construction and restores all worksites and affected properties to proper condition (or any agreements made with affected property owners)

**Duration: Two (2) Months**

**DELIVERABLES:**

1. Project Close Out/Completion reports for each project
2. Program Close Out/Completion report for the CAPEX.
3. A Photography Catalogue for the entire project by site location and chronological date.
4. A report on the overall implementation of the project which also includes the review of the physical condition of all work-site areas.
5. A report on the recommended maintenance procedures for the facilities.
6. A report on the status and closure of implementation of the ESMMP and actions and recommendations to be continued during the operation of the project (if any)



## PAYMENT SCHEDULE

Reports and Payment Schedule	Payment
<p><b>Procurement of Consulting Design and Supervision Services Water Supply and Sewage Management to Chapman Lane and Environs</b></p> <p>On Submission and acceptance of the following:</p>	
<p><b><u>Deliverable Task 1.1</u></b></p> <ul style="list-style-type: none"> <li>• Inception Report (21Days)</li> <li>• Submission and acceptance of Preliminary Designs</li> </ul>	<p style="text-align: right;"><b>5%</b></p> <p style="text-align: right;"><b>20%</b></p>
<p><b><u>Deliverable Task 1.2:</u></b></p> <ul style="list-style-type: none"> <li>• Submission and acceptance of Task 2.1: Draft Final Detailed Design</li> </ul>	<p style="text-align: right;"><b>10%</b></p>
<p><b><u>Deliverable Task 1.3:</u></b></p> <ul style="list-style-type: none"> <li>• Submission and acceptance of Final Detailed Design Package</li> </ul>	<p style="text-align: right;"><b>5%</b></p>
<p><b><u>Deliverable Task 1.4</u></b></p> <p>On completion of reports/deliverables on the Provision of Engineering Advisory Services</p> <ol style="list-style-type: none"> <li>1. Provide assistance to BWA in pre-qualification of contractors.</li> <li>2. Bid Packages for Contracting Firms inclusive of Scope of Works, Drawings and Technical Specifications.</li> <li>3. Recommendations on Materials.</li> <li>4. Technical Responses to Bid Queries</li> <li>5. Report on the analysis of bid proposals</li> </ol> <p style="text-align: center;"><b>Three (3) months (discontinuous)</b></p>	<p style="text-align: right;"><b>5%</b></p>
<p><b><u>Deliverable Task 2.1:</u></b></p> <p>On submission and acceptance of the following reports/deliverables on the Planning and Initiation Phase of the Supervision of Construction works:</p> <ol style="list-style-type: none"> <li>1. A Review of Work-plan submitted by the Contracting Firms engaged for the replacement works.</li> <li>2. Overall Project Schedule and Performance Criteria for the Contractor.</li> <li>3. Minutes of meetings held with Stakeholders of the Project.</li> <li>4. Report on Mitigation Strategies developed.</li> </ol>	<p style="text-align: right;"><b>5%</b></p>

<p><b><u>Deliverable Task 2.2:</u></b></p> <ul style="list-style-type: none"> <li>• On submission and acceptance of the following reports/deliverables on the monthly performance of the supervision of the construction works. This includes: <ol style="list-style-type: none"> <li>1. Minutes of the monthly meetings of the Implementation Team.</li> <li>2. Weekly site reports including all details involved in the replacement works.</li> <li>3. Monthly reports detailing the progress of the works with regards to the performance of the contracting firms with regards to the level of completion, change orders, project budget and the estimated cost to completion and the overall performance of the project with regards to milestones, schedule &amp; timeline, quality assurance, safety, cost, communications, problems encountered, lessons learnt, and successes achieved so far in the project.</li> </ol> </li> </ul> <p><b>Number of months depends on the contractor’s schedule.</b></p>	<p><b>45% of the total fees for the total construction phase divided into equal monthly payments</b></p>
<p><b><u>Deliverable Task 2.3:</u></b></p> <ul style="list-style-type: none"> <li>• On submission and acceptance of the deliverable – the Legal Base Plan (As-built Drawings) for the works.</li> </ul> <p><b>Two (2) months (discontinuous)</b></p>	<p><b>2%</b></p>
<p><b><u>Deliverable Task 2.4:</u></b></p> <ul style="list-style-type: none"> <li>• On submission and acceptance of the following reports/ deliverables on the Project Close-out/ Termination Phase of the Construction Works for the projects. <ol style="list-style-type: none"> <li>1. Project Close-out/ Completion Reports for each location.</li> <li>2. Assessment of the physical conditions of all worksites post-construction.</li> </ol> </li> </ul> <p><b>One (1) month</b></p>	<p><b>3%</b></p>

## 8. EVALUATION CRITERIA AND SCORING METHODOLOGY

BWA staff will review and rank the proposals and may or may not choose to interview several of the top-ranked Proposers.

### Technical Proposal Evaluation and Scores

Criteria	Maximum Score
Specific experience of the Consultant (as a firm) relevant to the Assignment.	10
Relevant experience on similar projects	10
<b><i>Sub-Total for criterion (i)</i></b>	<b>20</b>
(i) Adequacy and quality of the proposed methodology, and work plan, including level of detail, in responding to the Terms of Reference:	
a) Methodology and work plan	25
b) Organisation and staffing (overall team composition)	5
<b><i>Sub-Total for criterion (ii)</i></b>	<b>30</b>
(i) Key Experts' qualifications and competence for the Assignment:	
The consulting firm should provide the qualifications and experience of the proposed team, with specific emphasis on prior projects relevant to the assignment.	50
All members of the Consulting Team must have excellent communication and interpersonal skills and must be fluent in English.	
<b><i>Sub-Total for criterion (iii)</i></b>	<b>50</b>
The number of points to be assigned to each of the above Key Experts shall be determined considering the following three sub-criteria and relevant percentage weights:	
(1) General qualifications (general education and training, experience) 30 %	
(2) Adequacy for the Assignment (relevant education, training, experience in the sector/similar assignments) 70%	
(Total weight: 100%)	
<b>Maximum Technical Score (St)</b>	<b>100</b>
<b>Minimum Technical Score (St) Required to Pass</b>	<b>75</b>

### Methodology for Financial Score and Overall Proposal Ranking

The lowest evaluated Financial Proposal (Fm) is given the maximum financial score (Sf) of 100.

The formula for determining the financial scores (Sf) of all other Proposals is calculated as following:

$Sf = 100 \times Fm / F$ , in which (Sf) is the financial score; (Fm) is the lowest price and F the price of the proposal under consideration.

The weights given to the Technical (T) and Financial (P) Proposals are:

**Weight given to the Technical Proposal (T) = 0.7**

**Weight given to the Financial Proposal (P) = 0.3**

(Where the following must be true;  $T + P = 1$ )

Proposals are given their overall score (S) according to their combined technical (St) and financial (Sf) scores using the weights in the following equation:

$$\mathbf{S = St \times T + Sf \times P}$$

Proposals are ranked from the highest overall score to the lowest.

## **APPENDIX 1: CHAPMAN LANE AND ENVIRONS**

### **Chapman Lane and Environs**

The Ministry of Public Works is in the process of executing civil works in the area of Murphy's Pasture just northeast of the Bridgetown Sewage Treatment Plant within the City of Bridgetown, Barbados. This work proposes to alleviate the problems of flooding at Murphy's Pasture and surrounding areas such as Chapman Lane and Emmerton Lane. Such flooding poses a direct threat not only to property but also to the health of residents as floodwaters almost always contain black water carrying pathogens and grease, which could adversely impact the health of those who encounter the water.

Despite its proximity to the Bridgetown Sewage Treatment Plant (BSTP), this densely housed area is not currently connected to the nearby sewer system but is serviced by wells or pit latrines. Sewer mains are laid within proximity to the area, and as such, it may be possible, if the necessary levels can be attained, to direct wastewater generated from this area into existing sewer mains either by gravity or through the use of a small lift station to the BSTP for treatment.

In addition to 3<sup>rd</sup> Avenue Chapman Lane, it should be noted that flooding has also been reported within the avenues south of Westbury Road as well as in the lower section of Passage Road with its intersection with Baxters Road, and in an effort to avoid similar public health concerns to residents; the design and installation of sewerage infrastructure for approximately seven hundred and fifty (750) houses within the aforementioned areas is deemed necessary.

Evaluation of the additional wastewater flows generated and the ability of the BSTP to accommodate these additional flows should be discussed with BWA's Wastewater Division's Engineers and senior technical staff.

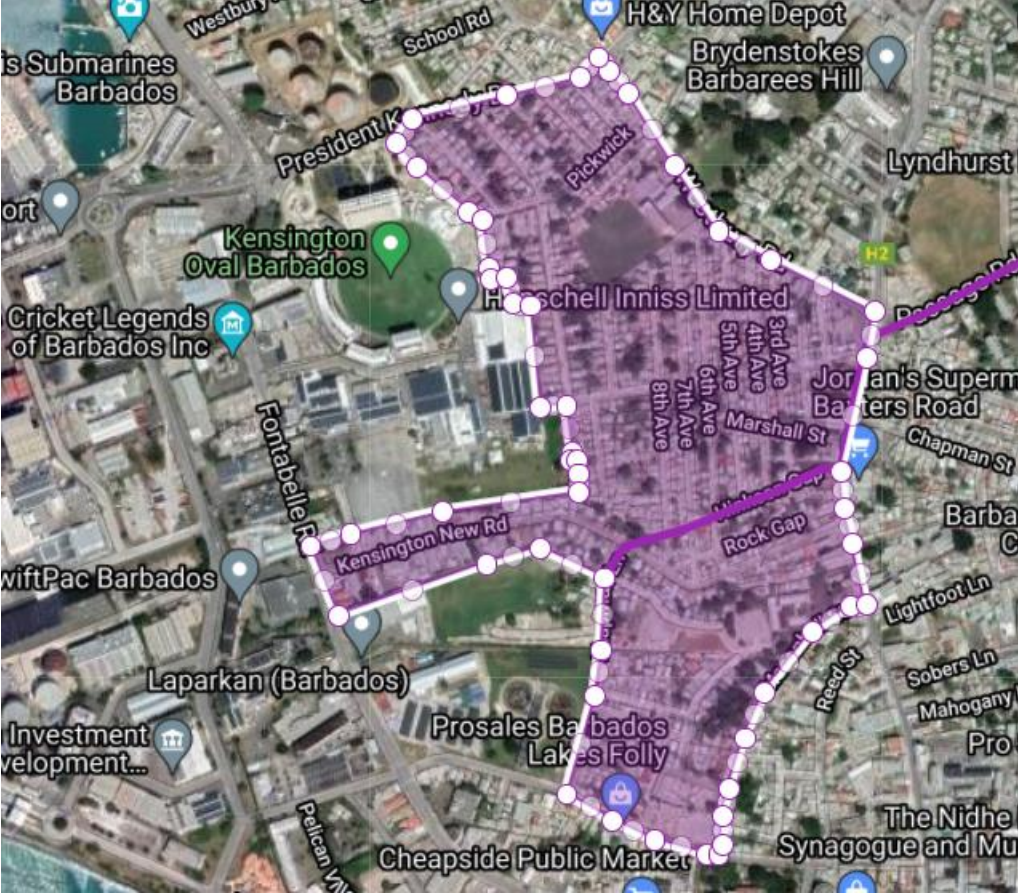


Figure 1: Map of Chapman Lane and Environs