



# Urban Wastewater Treatment Plant

## Invitation for Expression of Interest

*September 2022*

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### 1. Background

- 1.1. Gibraltar has a residential population of approximately 32,000 as well as an additional 15,000 transfrontier workers inhabiting an area of 6.5 km<sup>2</sup>, arguably making it one of Europe's most densely populated areas. Sewerage infrastructure for the collection of urban waste water in Gibraltar is arranged around a principal north-south gravity sewer which receives pumped flows from a series of sewer pumping stations in addition to gravity flows from originally served areas in the old town. The effluent enters the sea at a location known as Europa Point, Gibraltar's southernmost tip whose surrounding waters are designated as a Marine Protected Area of international importance. The sewage system routinely collects all of the waste waters produced in Gibraltar.
- 1.2. Gibraltar is served by a dual seawater and desalinated water supply system. The seawater system is used for ancillary purposes such as toilet flushing and firefighting. As a consequence, waste water generated tends to have a high salinity for the majority of the time. Some areas of Gibraltar are served by combined sewerage system and, during periods of rainfall, surface water enters the sewers causing dilution of the salinity. The waste water to be treated is therefore subject to significant variations in salinity that may affect the efficiency of conventional biological treatment methods.
- 1.3. His Majesty's Government of Gibraltar (HMGOG) has committed to maintaining or, where possible, improving on the environmental standards implemented by the European Union (EU). The obligation to construct an Urban Wastewater Treatment Plant is enshrined in the Public Health (Urban Wastewater Collection and Treatment) Regulations 1999 [Available from: <https://www.gibraltarlaws.gov.gi/legislations/public-health-urban-waste-water-collection-and-treatment-regulations-1999-500> ]. This legislative instrument originates from the EU's Urban Wastewater Treatment Directive (UWWTD) which HMGOG is committed to implement, in its entirety, in Gibraltar. HMGOG has therefore embarked on this Expression of Interest (EOI) to develop an UWWTP in Gibraltar that will allow it to meet all of the requirements of the aforementioned legislative instruments.

1.4. In order to comply with the requirements of the Public Health (Urban Wastewater Collection and Treatment) Regulations 1999, at least secondary treatment of waste water is required. The particular requirements of the UWWTP may be summarised as follows:

- Minimum (secondary) level of treatment - to achieve discharge standards where relevant;
- Compact treatment processes – due to restricted site area;
- Enclosed treatment works – to reduce visual impact;
- Odour control – to achieve stringent emission standards;
- Landscaping of plant – to enhance local amenity value;
- Salinity – a treatment process able to treat sewage with varying salinity levels, balancing to control sewage salinity levels or eliminate salinity completely.

## **2. General Specifications & Evaluation**

2.1. HMGoG intends to obtain EOIs from service providers for the following works under this Project:

The Design, Build, Finance and Operation (DBFO) of an UWWTP, including an outfall where relevant, in Gibraltar. On satisfactory completion of the Design, Build and Finance phase, an Operation and Maintenance (O&M) period of 20 years will commence.

2.2. The Service Provider will be expected to represent and warrant to HMGoG that it has the necessary skill, expertise and experience, or is able to demonstrate that it is able to acquire the services of a competent and capable third party, acceptable to HMGoG, in order to properly and competently execute such a project and run such a facility during the term of the concession. The scope of the works includes the design of the scheme, financing, manufacture, supply, delivery, construction, testing, commissioning and operation and maintenance including but not limited to the following main elements: geotechnical investigations, enabling works, earthworks, foundations, retaining structures, building structures, wastewater treatment plant, auxiliary equipment, ventilation equipment, electrical equipment and switchgear, sludge storage and/or treatment and disposal, drainage works, road works and signage, temporary traffic management required to facilitate the works.

2.3. The scheme is to be designed in accordance with relevant British Standards and shall comply with relevant Gibraltar legislation and requirements. A site for the waste water treatment works has been selected adjacent to Europa Point. The site, known as the 'Brewery Crusher Site', is located on the coast and is relatively small in size. The site is directly adjacent to a Mosque, is close to the historic site of 'Nuns Well' and Europa Point Lighthouse, the latter being a popular viewing point for tourists. There are other public amenity sites in the area such use as a multifunction stadium. It is recommended that potential service providers familiarise themselves with the site before submitting any EOIs. Site visits can be arranged by contacting the Department of the Environment on the details provided in section 4.4. Notwithstanding the above, the Department of the Environment is open to consider alternative placement locations and solutions which will

be given equal consideration. All proposals will be subjected to a rigorous environmental assessment process.

- 2.4. A tentative works programme indicating the various dates and periods for construction of the plant must be included as part of the EOI. Project completion shall be achieved and the plant commissioned by **no later than end of 2024**.

### **3. Carbon critical design**

- 3.1. It is a requirement of HMGoG that a guiding principle in the detailed design and operation of the UWWTP is that consideration is given to the “carbon footprint” of any construction or operational process during its design to attempt to minimise it. The term “carbon footprint” can be defined as “the mass of carbon (or carbon equivalent), released to the atmosphere as a result of an activity”. For the purposes of this project, the carbon footprint of any element shall be considered on a life-cycle basis to include manufacture, transport to site, and impact in use.
- 3.2. Designers for the civil works elements and the treatment process shall consider the amounts of carbon dioxide, or other greenhouse gases such as methane or nitrogen dioxide, during the lifecycle of the design element. HMGoG is conscious of the carbon footprint associated with the development and operation of the UWWTP which could represent as much as 80-90% of the lifetime carbon footprint associated with the development, including the construction phase. HMGoG therefore wishes to explore options for the reduction of the operational carbon footprint of the works.
- 3.3. Typically, for a Wastewater Treatment Plant, energy and chemical usage are the two largest components of the plant’s carbon footprint. Proponents are required to detail in their proposals their methods for the reduction of the carbon footprint associated with these elements.
- 3.4. In addition to these initiatives, Contractors are requested to make proposals within their EOIs to further minimise the plant’s carbon footprint including the disposal or reuse of sewage sludge. These proposals shall be detailed to describe the proposed approach, the capital and operational costs over the lifetime of the contract, and the expected benefits in terms of the plant carbon footprint. The benefit should be quantified in tonnes of carbon (or carbon equivalent) per year. Proponents shall also outline all assumptions made in formulation of the proposal.
- 3.5. The following general criteria will be taken into account in assessing the EOIs submitted. Additional criteria may be included in later stages of the process.
  - 3.5.1. *Technical, operational, managerial, commercial and financial expertise and ability to ensure the successful delivery of the project;*
  - 3.5.2. *The nature, type, style and appearance of the facility that the proponent will be offering;*
  - 3.5.3. *Proposed operating fees;*

- 3.5.4. *Construction and operational environmental management plan and policy for the facility;*
- 3.5.5. *Company and directors track record;*
- 3.5.6. *Completion time for the construction and commissioning of the Works.*

#### **4. Instructions and submission of Expression of Interest**

- 4.1. Interested parties should understand that submissions need only include general process engineering details of any concepts including preliminary layout plans at this stage. In addition to the Appendix, further technical information on the existing sewerage network including a characterisation of sewage effluent can be provided upon request by writing to [info.environment@gibraltar.gov.gi](mailto:info.environment@gibraltar.gov.gi)
- 4.2. A process of consultation and negotiation will follow with parties that submit ideas or concepts that are of interest to HMGoG. Those concepts, ideas or proposals may need to evolve or be adapted as discussions or negotiations move going forward.
- 4.3. In addition to the requirements elaborated in previous sections, the following information must be submitted as a minimum:
  - 4.3.1. *Overall Method Statement for proposed solution;*
  - 4.3.2. *List of sub-contractors;*
  - 4.3.3. *Declaration of Insurance Cover;*
  - 4.3.4. *Evidence of Project Financing;*
  - 4.3.5. *Completed schedule of main cost items;*
  - 4.3.6. *Proposed charge rate and credit provider details and a copy of the financing agreement;*
  - 4.3.7. *An asset management plan including operational costs.*
- 4.4. EOIs should be clearly marked 'Urban Wastewater Treatment Plant' and submitted in a sealed envelope addressed to:

*Dr. L. Mesilio*

*Chief Executive Officer*

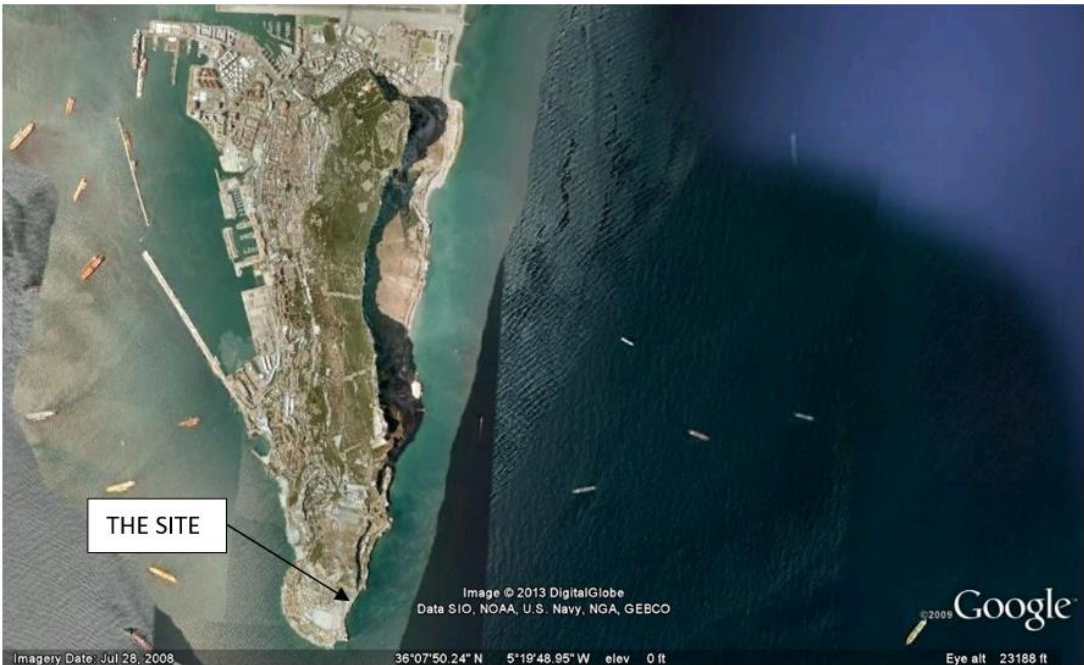
*HM Government of Gibraltar, Department of the Environment, Sustainability, Heritage and Climate Change.*

EOIs must be written in English and deposited in the Expressions of Interest Box situated at **Suite 2B, Leanse Place, Town Range, Gibraltar by no later than noon on the 31<sup>st</sup> October 2022**. Electronic submissions by email are also accepted and these can be submitted to [info.environment@gibraltar.gov.gi](mailto:info.environment@gibraltar.gov.gi) by the aforementioned closing date. HMGoG reserves the right to reject any or all submissions. Expressions of interest delivered after the specified time and date will not be considered.

For further information on the EOI, please contact Tel: (+350) 20079742.

**Important Notice:** This EOI creates no legal rights or obligations and cannot be relied on for any such purpose.

**Appendix – Potential Location Plan and Photographs**





**Photograph 1 – View towards north west of site showing The Mosque**



**Photograph 2 – View towards south of site (and Europa Point Lighthouse)**

