

## **PART C3.1**

### **DESCRIPTION OF THE WORK**

#### **C3.1.1 Employer's Objectives**

The Employer's objective is to provide additional treatment capacity at the St Francis Wastewater Treatment Works to cater for future development in the St Francis, Cape St Francis and Sea Vista communities. This will be achieved by increasing the current capacity (ADF) of the exiting wastewater treatment works from 750kl/d to 2Ml/d. This will also ensure that effluent being discharged from the wastewater treatment works complies with relevant norms and standards.

#### **C3.1.2 Overview of the Works**

The contract comprises the installation and commissioning of various mechanical equipment and the associated electrical and electronic works. It also includes the construction of new buildings and structures as well as the cleaning, inspecting and repair of existing structures. In addition, existing infrastructure that are abandoned will be made safe. The Works mentioned above is to be constructed in three Portions as detailed in Clause 5.14.1, which the Contractor is required to programme accordingly.

#### **C3.1.3 Extent of the Works**

It is anticipated that the Works will be constructed in three portions, as detailed below.

It is also noted that various aspects of the Works from the **start of the Inlet Works** to the **end of the Chlorine Dosing System** is to be designed and constructed by the Specialist Contractor. All designs are to be first approved by the Engineer prior to construction.

##### **Portion 1**

- ▣ Refurbishment of the existing Works, inclusive of all Civil, Mechanical and Electrical works
- ▣ Construct and commission new Inlet Works
- ▣ Construct and commission new Balancing Tank

##### **Portion 2**

- ▣ Installation and commissioning of two new 625kl/d SBR units and associated Civil, Mechanical and Electrical & Electronic Works
- ▣ Construction of new buildings – Office, ablutions, generator room and chlorine dosing building
- ▣ Refurbishment and repurposing of existing buildings
- ▣ Demolition of existing buildings
- ▣ Construction of sludge drying beds
- ▣ Construction of dried sludge handling facility
- ▣ Construction of gravel access road
- ▣ Making safe of redundant infrastructure
- ▣ Install security fencing

##### **Portion 3**

- ▣ Balance of the Works

#### **C3.1.4 Location of Works**

St Francis Bay WWTW is situated in the town of St Francis Bay in the Eastern Cape Province.

The Works is located to the south of St Francis Bay along the R330 from Humansdorp to Cape St Francis and is accessed via the airport turnoff from the R330. The co-ordinates for the Works is 34°11'3.48"S and 24°49'30.81"E.

### **C3.1.5 Temporary Works**

Temporary Works shall remain the responsibility of the Contractor.

The Contractor is responsible for the design and protection of all the Temporary Works required for the construction and execution of the Permanent Works. This includes, inter alia, temporary roads, access control, accommodation of traffic, shoring of trenches and excavations, stormwater control, dewatering, formwork, shuttering, scaffolding, all health and safety measures as well as temporary support systems, until the completion of the Contract.

#### **C3.1.5.1 Special Water Hazards Control**

It should be noted that the area of the Works will be low lying and prone to flooding and ponding during and subsequent to rainy periods. The topography is flat and surface drainage will be slow.

As a result, excavations may be delayed due to ponding of water and the Contractor will have to allow for various methods of de-watering to minimise delays.

#### **C3.1.5.2 Other Services (Telecommunications, Electricity, etc.)**

The Contractor shall ensure that the position of all existing services affected by the Works have been verified before construction works commences. Should it be necessary to lower or relocate any service, the Contractor will be required to make the necessary arrangements with the relevant service provider and to advise the Engineer accordingly.

#### **C3.1.5.3 Survey Beacons and Benchmarks**

The Contractor shall be responsible for the preservation of all land survey, erf or other pegs, benchmarks and beacons. If damage or disturbance of any such pegs or beacons is caused by the operations of the Contractor or his subcontractors, the pegs are to be replaced by a Registered Land Surveyor at the cost of the Contractor. Information regarding the position of all such pegs will be made available to the Contractor by the Engineer.

The Contractor is to ensure that no spoil is placed over erf pegs or benchmarks, and that these are adequately protected for the full duration of the Contract.

Where disturbances of boundary pegs is unavoidable due to excavation or other operations adjacent to the pegs, the Contractor shall advise the Engineer or his Representative immediately, and agreement is to be reached that the disturbance of the peg is unavoidable and a strict record of such disturbed pegs is to be kept. Such pegs are to be replaced by a Registered Land Surveyor as described above and the Contractor is to submit proof of the cost of replacement of pegs. The Contractor will be reimbursed on a basis pro-rata to the total cost of peg replacement as determined on completion of the Works.

#### **C3.1.5.4 Protection of Existing Works**

The Contractor shall take all necessary steps to ascertain the location of existing services before commencing any section of the works and shall exercise the greatest care when working in the vicinity of such services.

No more than three weeks and not less than one week before commencing his operations in any particular area, the Contractor shall request in writing from the Engineer the latest available drawings showing the location of services already installed.

The Contractor will also be responsible for contacting the various service providers, arranging meetings and verifying all known, as well as possibly unknown, services on site.

The Contractor shall take all necessary steps to protect any existing works whatsoever against damage which may arise as a result of his operations on Site. The Contractor shall bear the cost of the repair of damage to any service, the existence of which could reasonably have been ascertained by him in good time.

Where the Contractor is responsible for damage for which repairs have to be carried out by the Employer or an outside Authority, the costs of these repairs will be recovered by means of a deduction from the Contractor's monthly Payment Certificate. The Employer will attend to the payment of monies due to outside authorities, should the Contractor not make direct payment timeously.

#### **C3.1.5.5 Tidying up of the Works**

The Contractor shall take note that progressive and systematic finishing and tidying will form an essential part of this contract. On no account shall spoil, rubble, materials, equipment or unfinished operations be allowed to accumulate in such a manner as to unnecessarily be a hindrance to or impede the activities of other contractors or service providers. In the event of this occurring, the Employer shall have the right to withhold payment for as long as may be necessary in respect of the relevant works in the area(s) concerned.

Upon completion of the Works or any portion thereof, the ground, fences, gates and any structures that have been interfered with are to be carefully restored to their original condition and all rubbish, tools, tackle, plant and material must be removed so as to leave the Site in a clean and orderly condition. No additional payment shall be made for work described in this sub-section.

#### **C3.1.5.6 Nature of the ground and Subsoil Conditions**

A description of the expected subsoil conditions is included in Section C4.