

Vals River at Tweefontein (Bothaville)

SCOPE OF WORKS

1. EMPLOYER'S OBJECTIVES

The employer's objectives are to provide a gauging structure in the lower reach of the Vals River. This information, in combination with data gathered at station C6H009 (Vals River @ Lindley), in the upper reaches of the Vals River, will assist operators of the Bloemhof Dam to synchronise releases with natural flow events in the Vals- and Vaal River and thus optimise the use of stored water from the dam, while also ensuring the safety of downstream users, property and animals during these flood events.

The gauging structure, therefore, needs to be equipped with real-time platforms adhering to requirements/standards set by the Department of Water and Sanitation (DWS).

The identified site for the gauging structure adheres to the following criteria:

- An adequate straight length approach channel.
- Approach channel with flat slope.
- Good foundation conditions.
- Stabilised banks, due to the presence of the existing structure.
- Lower cumulative environmental footprint.
- The bridge is possibly far enough downstream of the existing weir not to cause any variable backwater effects.
- Site access is good and available on both banks.
- Being able to use the existing structure as a cofferdam during the construction phase.

2. OVERVIEW OF THE WORKS

The estimated planned contract duration will be 18 months and the works will consist of the construction of a concrete measuring weir structure in the Vals river close to the town Bothaville in the Free State Province.

Access to the site of the works will be given to the Contractor on the date arranged between the Employer and the Contractor well prior to the Commencement Date. The Site of the works is next to the Vals River according to the site layout drawings and will be confirmed during the site handover meeting, which will remain in use during the course of the work.

3. EXTENT OF THE WORKS

The works to be performed as part of this Contract mainly consists of the activities listed below. This list is not necessarily complete, nor will it limit the extent of work to be carried out under this Contract.

3.1. General

- a) Establishment of camps on site.
- b) Accommodation of traffic.

3.2. Sourcing Material

- a) Sourcing construction material from commercial sources.

3.3. Bulk Earthworks

- a) Bulk earthworks for excavation up to foundation depth (where applicable).
- b) Hard excavation to slope rocky outcrops.
- c) Cleaning of foundations to ensure suitable bonding between concrete and underlying layers.
- d) Construct access roads.

3.4. Concrete Works

- a) Erecting shuttering.
- b) Fixing of reinforcing.
- c) Place and compact concrete in structures (max allowable gradually irregularity $\pm 5\text{mm}$ on final crest levels).
- d) Installation of stainless-steel crest iron (max allowable gradually irregularity $\pm 2\text{mm}$ on final crest iron levels). The Contractor needs to allow specialists to assist with the installation of the crest iron prior to concrete casting.
- e) Installation of recording equipment.

3.5. Maintenance

- a) General erosion protection

3.6. Finish Off Site

- a) Top soiling of required areas
- b) Finishing of site

4. LOCATION OF THE WORKS

The Site comprises of the area alongside the Vals river close to town Bothaville in the Free State Province.

The term "Site" as defined in the General Conditions of Contract, Third Edition (2015), will comprise the full works reserves as listed above. The "Site" will also include land not provided by the Employer where equipment and/or materials for use in the permanent works of the contract can be stored and/or stockpiled with the provision that the land selected for this purpose be approved by the Engineer. The Contractor must make his own arrangements for the use of such land and must obtain written approval from the owner(s) concerned.