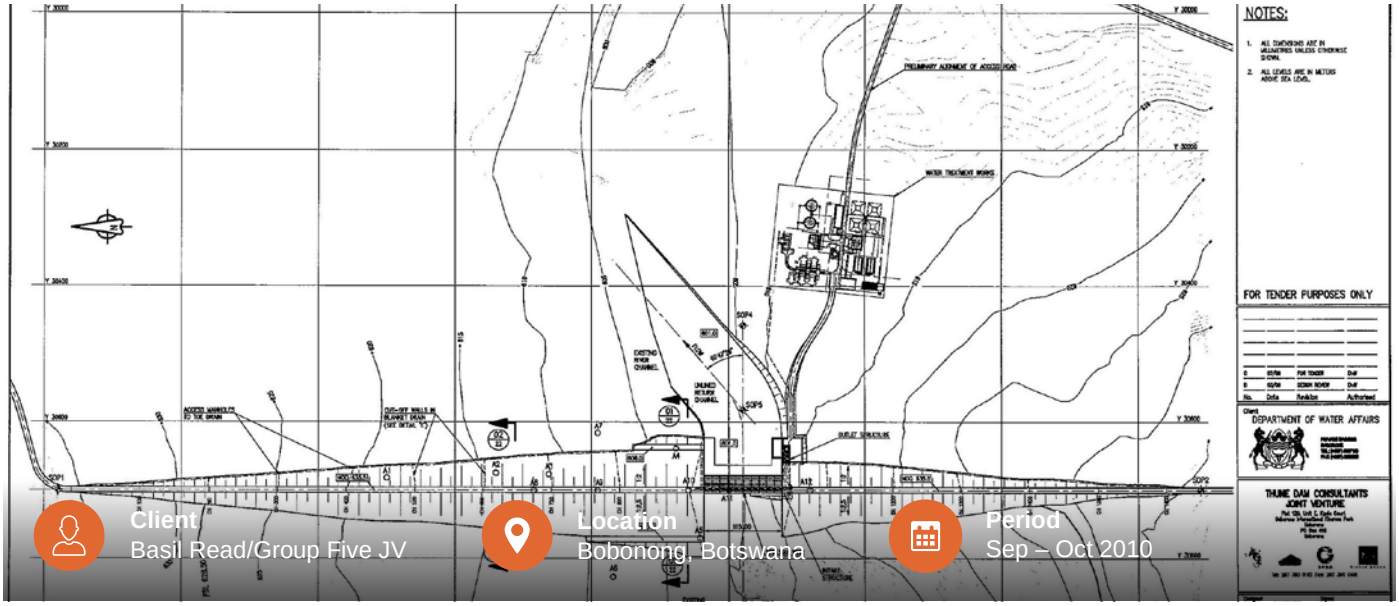
PROJECT SHEET

THUNE DAM
BID PREPARATION



Tender Pricing and Preparation for the construction of the Thune Dam in Botswana

Basil Read / Group Five Joint Venture (BR/G5 JV) requested PMI Construction Services (PMI) to assist them in the preparation and compilation of the tender for the construction of the Thune Dam in Botswana.

The bid preparation period was 5 weeks and required that PMI evaluate the following issues in order to produce a fully priced tender:

- Conduct a site visit in order to evaluate the site condition
- Interrogate the contract documentation and identify and prepare a risk review
- Resource the contract and produce appropriate methodologies
- Programme the contract
- Produce a cost estimate using the rates and resources supplied by BR/G5 JV
- Convene risk reviews and tender evaluation meetings between the partners
- Compile the tender submission and associated bid documentation

Tender Preparation

BR/G5 JV supplied a list of available resources together with their cost rates that were to be used in the build-up of rates.

A programme was then drawn up which highlighted the sequence of events as well as indicating the pace at which construction would need to take place. The programme, specification, site conditions, available resources and cost efficiency were used to compile the methodologies that would be adopted to price the work.

The main elements of the tender preparation can be summarised as follows:

Camp Establishment

No accommodation or services were available on site. In addition to the contractors' own needs, the engineer required 26 furnished & serviced houses plus offices and laboratory to be provided within 3 months.

River Diversion

Although the river was dry for most of the year, arrangements had to be made to accommodate the water flow during the wet season.

Dam Embankment

The initial requirement was to excavate down to solid rock below the embankment footprint area to allow for the consolidation and curtain grouting to commence.

The 1 600m long and 34m high embankment wall required 1,100,000m of earth fill which was made up of a clay core, filter layers, general fill and rock protection. This material was all sourced on site.

Concrete

The mass concrete spillway of 80,000m3, plus intake tower and outlet works were required to be built within 19 months.

Crushed stone

Concrete, filter layers and the surfaced district road required that a crusher be established to produce some 230,000t of graded crushed stone plus 150,000t of rip rap.

Relocation of the district road

The contract also required 14km of new surfaced road together with a 5 span bridge.