



END-OF-PROJECT REPORT FOR MATIBI HOSPITAL BOREHOLES

INTRODUCTION

Zimbabwe faced a spate of waterborne diseases in August 2018 which claimed lives in the capital city and was spreading fast into other areas. Like any other community, Matibi Mission took measures to arrest the outbreak, especially of cholera and typhoid. Immediate measures included treating and admitting suspected cases free of charge, including quarantining the patients where necessary. However, short-term measures were considered inadequate; hence it was necessary to look ahead in time and sink boreholes to augment the meagre supply of clean and safe water for both the hospital and the immediate community. A project was brought up in the following month in the heat of the outbreak and is the one being reported hereunder.

OBJECTIVES

- i. To drill 2 boreholes, each 40m deep
- ii. To case the two drilled boreholes up to 20m deep using 180mm PVC
- iii. To mount a bush pump on one of the drilled holes
- iv. To install a solar pumping system on one of the drilled holes

PROJECT NARRATIVE

Early August 2018, a proposal to construct two boreholes was brought up. The initial arrangement was to let a company do everything from drilling and casing to the construction part. However, this idea could not stay due to skyrocketing prices. Initially the price for constructing 2 boreholes was 5 Thousand Dollars RTGS but in a space of a week the prices had nearly doubled. So, only drilling and casing was given to a company while construction of the boreholes (one hand-pumped and the other solar-pumped) would be done by the hospital's general hands led by Douglas Waza.



By August 15th, the planners had gathered 3 quotations and subsequently chose Pote Drilling. However, Pote was quick to abandon the project citing the fast-changing prices. A new round of quotations was therefore made, in which the contract was eventually given to Bornwater Drilling. This time 4 companies had tendered.

There was a series of fruitless negotiations with Pote until the need to quote anew was unquestionable. The project had already lost nearly 3 months to stagnation up to October 31st. The new quotations had unbelievable price differences, with one charging USD4.400, another 15.600 Bonds (local proxy currency) and the other one USD9.000. Some 20 agonising days went by before the terms of reference were drawn and agreed upon, meaning more time lost. The critical issues which had hampered progress included payment arrangements where the contractor had demanded 100% of the fund in cash before commencing the work.

It was on November 20th when a contract was finally agreed upon. An initial payment of half the fund was paid via WU on November 22nd. From that time, nearly 3 weeks were spent servicing the contractor's machines which had reportedly broken down in their previous contract in Bulawayo. The actual drilling was done on December 13th when the contractor had borrowed a compressor. The work was conducted so fast that two boreholes were drilled and cased within 5 hours. A day after, the FFM paid some USD1,477 to Waza the hospital handyman to construct the boreholes.

The recipient tried in vain to get the money at the nearest vendor in Zvishavane, and on December 23rd he tried the one in Masvingo where he was unfortunate again. It was only after the holiday that he got the money from Masvingo and began purchasing the necessities on January 7th. However, he reported that the suppliers had hiked even the USD prices of the materials and this affected the pace of the activities. Sometimes he had to convert the USD to South African Rands and this added to the time consumed. Eventually everything was in place by January 25th and the project paced up to completion. On January 28th everything was done and the boreholes were opened to users.



CHALLENGES

By the look of things, the idea of boreholes was treated by the hospital as not so important in the first place; it was neither first nor second in priority. There were seemingly no plans at all to refurbish the broken down boreholes, neither was the hospital planning to drill new ones. Hospital employees were buying vegetables instead of growing those in the hospital garden and it seemed that they were contented with it. So, when the hospital tendered a proposal to the FFM for a donation of boreholes, the commitment of this institution was low, it could be seen. The hospital was not ready to pay the required 20% of the proposed project costs. Luckily or not, the FFM had to intervene from a humanitarian angle when there was a cholera and typhoid outbreak; otherwise the hospital had failed to comply with the FFM's partnership approach which demands that the recipients play a part in funding development projects.

When the boreholes project was accepted, the next challenge was on deciding the kind of boreholes to construct. One idea was to do AC-powered boreholes but the AC power supply was considered too little for this use. An alternative was solar-powered boreholes but then again there were fears about maintenance in case of breakdowns and other related ins-and-outs. On the other hand, constructing bush pumps was going to be helpful only for villagers and gardeners but not the hospital premises. Had it not been for the waterborne diseases emergency, bush pumps would do but now there was need to supply freshwater to the hospital as well, for use in the ablutions, wards and residences. In consideration of both conventional and emergency uses of the water, it was decided that one borehole would be a bush pump and the other a solar-powered system.

As if those challenges were not enough, there was also the challenge of securing a contractor. At one time, a selected company declined the project saying the quotation was no longer valid. Therefore a new set of quotations was collected, only to learn that the earlier selected company had more than doubled its prices. A new company was identified and this one had



fairer prices and was charging in three currencies including the USD. More than a month was lost to this process of trying to identify a contractor.

Worse still, there arose a challenge regarding the method of payment. The selected Bornwater Company accepted three forms of money namely RTGS, Bonds or Forex (USD/Rands). However, RTGS and Bonds prices were changing every day and were therefore undependable. The real challenge was actually on the fact that while foreign currency was the feasible way to go, the banks were not reliable anymore. This necessitated the method of Western Union Money Transfer (WU) to enable the contractor to access the needed cash with little or no trouble. Other money transfer methods were dropped for fear of inconveniences because those methods relied on commercial banks whose reputation was continually falling. So the WU, an independent vendor agency, was selected ahead of other alternatives.

Furthermore, the contractor did not start work immediately once the demanded money was paid. A compressor was reported to have broken down and was taking ages to repair. Fortunately the engineer agreed when he was asked to outsource the machine for the sake of project expediency and the urgency at hand. Both boreholes were drilled in a space of 5 hours against the initial expectation that it was going to take 2 days. The contractor also understood when the FFM asked for post-completion payment of one of the boreholes. Otherwise the company had demanded cash upfront.

A minor problem but which warrants mentioning is that the installation of boreholes on the drilled holes took longer than planned. The hospital's local handyman did not access the money in time, reportedly due to distance from town and pressure on the nearest Western Union vendor. Cash was unavailable in Zvishavane town and the only way was to travel to Masvingo on a later date. Even in Masvingo, Western Union was facing a lot of pressure related to the festive season. So it was only after the New Year period that the boreholes were mounted. Worse still, the prices of necessities had continued to rise even in the USD denomination - so much that the labourers claimed that they had nothing to take home after completing the work. The rising prices had eaten into the labour fees. The seriousness of



price hikes was demonstrated by some city councils which revised their municipality budgets more than twice since last December.

SUCSESSES

It is a shining success that the hospital now has freshwater for emergency and conventional uses despite early challenges of adopting this project. The FFM is appreciated immensely for its gallant decision to donate the boreholes at a time when the hospital was unprepared to contribute for collaborated work. The planners were creative enough when they decided to engage a local handyman instead of giving all the work to a company, which was going to be more expensive. Some USD2.100 was saved in this way. Given the above-mentioned price inconvenience, an outside contractor would have abandoned the work unfinished owing to the crisis. The contracted company also commended the hospital for effective siting of the boreholes. The hospital also liaised with critical stakeholders in time, including the national water authority who had to grant permission before the boreholes could be drilled.

LESSONS AND RECOMMENDATIONS

- These boreholes require continuous monitoring to ensure maintenance.
- The boreholes are a hands-on measure to prevent waterborne diseases.
- The hospital is advised to maximise the use of the boreholes for gardening, including, where necessary, inviting some villagers to the hospital gardens instead of letting the garden stay fallow.
- Western Union Money Transfer may stay as long as the financial crisis is still prevailing.
- Contractors and/or suppliers who charge in local currency have to be asked to charge in USD for it is a more stable currency. However, even this stable currency somehow gives in to the financial volatility in the country.
- Engaging local hands ahead of outside contractors remains a prudent approach whenever the work at hand is within the capabilities of any local doers, especially in labour-intensive projects.



ATTACHMENTS





After drilling and casing the borehole that can be seen in the foreground, the contractor is drilling another hole in the background.





A solar system being assembled for one of the boreholes.





The solar power system after completion.





The hand pumped borehole after completion.





Hand-pumped borehole under construction.