

J.P.WHITTER

(WATER WELL ENGINEERS) LTD THE POTTERIES GARAGE SMALLBROOK LANE LEIGH

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6th August 2018

Ref:6/8/28721

MSW HEWETSONS 6 Church Street Clitheroe Lancashire BB7 2DG

F.A.O. MR C HEWETSON

Dear Mr Hewetson

Following your enquiry regarding a proposed water supply borehole, I have pleasure in submitting to yourself a detailed quotation for your consideration. If you wish to discuss any point of the following quotation or you have any queries, do not hesitate to contact myself.

Estimate & Budget Cost Drilling Operation

To sink a 6" finished diameter borehole for the purpose of water abstraction at Chapel Croft Farm Slaidburn Road, Newton in Bowland, Lancashire BB7 3DL.

To provide all drilling equipment which would include a rotary machine mounted upon a six wheel lorry. This equipment would be delivered to site, erected and removed from site upon completion of the drilling operation.

Drilling would commence with 10" diameter, or large enough diameter borehole to accept temporary casings, if required. Drilling would continue with 10" diameter 3 metres into rock head or a minimum of 13 metres. The 6" diameter welded steel lining tubes would be installed into the 10" diameter borehole and socketted 3 metres into the rock, or a minimum of 13 metres, which is carried out as an Environment Agency requirement.

The 6" diameter permanent lining tubes would be grouted into place using cement grout. The cement grout is inserted in the annulus between the borehole wall and the permanent lining tubes. This is to seal out all surface water and any contaminants which may enter the borehole and so contaminate the water supply. The cement grout is then left for a minimum of 24 hours to enable the grout to set.

Drilling would then continue up to a depth of 60 metres. If a sufficient water supply isn't found at this depth, then an addition of £86.95 per metre would be added. The increase in the costs of the permanent lining tubes beyond 13 metres would be £89.65 per metre.

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Pumping Equipment

To excavate an area of approximately 3' square by 2'6" deep around the borehole lining tubes, and to install a concrete base and install a pre-cast concrete manhole with access cover at ground level.

To supply and install a DAB or equivalent electric submersible borehole pump with a capacity of 2m3/hour (500gph). The borehole pump would have a single phase electric motor.

The borehole pump would be installed on 40 metres of 1" galvanised steel rising main, screwed and socketted in 3 metre lengths. This is for ease of installation and future maintenance which maybe required.

The pump drop cable would be attached to the rising main and attached to the pump with a waterproof resin joint.

The well head chamber would include a steel borehole cap to suspend the rising main and pump upon, a 1" galvanised steel swept tee, a 1" brass gate valve and a junction box for the electrics.

The borehole would be pumped to determine the yield, however we cannot guarantee quality or quantity of water achieved from a borehole.

Supply and install a 100litre pressure cylinder and controls.

Others to excavate a trench from the well head chamber to the location of the pressure cylinder. Ourselves to supply and lay 32mm MDPE water main and armoured cable, others reinstating the excavation.

The works terminating at a fused isolator adjacent to the pump controls, others to ensure a sufficient electricity supply is brought to the fused isolator, and a 32mm MPDE fitting on the pressure cylinder in readiness for others to connect onto and into the properties water system.

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A budge cost to sink a borehole to a depth of 60 metres, supplying and installing 13 metres of 6" steel lining tubes, grouted into place, supplying and installing a borehole pump suspended upon 40 metres of 1" galvanised rising main, screwed and socketted in 3 metre lengths, to construct a well head chamber, to pump the borehole to determine the yield, supply and install a 100litre pressure cylinder, supply and lay water main and armoured cable in the trench excavated and reinstated by others, the works terminating at the fused isolator and the pressure cylinder, would be £11,600.00 plus VAT

A site visit would be required in order to confirm the quotation, as the site hasn't been viewed.

It would be advisable to obtain an opinion from a hydrogeologists in order to provide an opinion as to the likelihood of obtaining a water supply on the site. The cost for this would be £350.00 plus VAT.

Should any water treatment be required upon completion of the borehole, then this can be advised upon and quoted for upon completion of the works and a representative water sample, which would be obtained upon completion of the drilling works at a cost of £295.00 plus VAT per sample

All works carried out to a good standard and the site left in a clean and tidy condition, all drilling spoil to remain on site, or removed at cost.

I hope this quotation meets with your approval and await your further instructions.

Yours faithfully

SALLY WHITTER