Main component parts of a borehole system

*In the borehole*
- **Borehole pump and cable**
  Sized to suit your pressure and flow requirements and lowered to the correct depth within the borehole, the borehole pump will be fitted with a non-return valve to help prevent air locks.
- **Supply pipe**
  Sized to suit your flow requirements, minimum of 32mm either MDPE pipe or a specialist flexible rising main depending on application.
- **Support rope**
  Nylon or metal support rope to hold the pump at the required height in the borehole, a flexible rising main does not require a support rope.

*Optional recommendations*
- **Low level cut out protection**
  Water level probes can be installed to protect the pump should the water level in the borehole drop; low level and high level probes can be installed depending on the style and type of controls.

*On the surface- well head*
- **Well head manhole chamber**
  Installed at the required depth and designed to suit your requirements, FWT offer basic concrete or plastic chambers with a metal chamber lid to suit your load requirements or if required specialist sealed and lockable chambers with greater load bearing capabilities.
- **Sealed wellhead**
  WRAS approved specialist sealed wellhead flange to cap the borehole and prevent any surface water entering the borehole.
• **Supply pipe**
  WRAS approved pipe and fittings usually an elbow will be used on top of the flange to direct the water out of the chamber.

• **Borehole pump and low level cut out cable**
  The flexible pump and probe cables are usually terminated in the chamber into an IP67 rated plug or junction box and armoured cables will then run to the control box.

• **Support rope tie off/ anchor point**

**On the surface controls**

• **Borehole control box**
  Fixed or variable speed controls with or without run dry protection or low level cut out protection and soft start capabilities. There are many options with reference to borehole pump control, FWT will design a system to match the yield and capability of the borehole and your pressure and flow requirements.

• **Signalling device**
  The borehole pump and control box will require a signalling device to operate. This can be a simple float switch in a tank or if using a pressurised system then a pressure vessel and pressure switch will provide the signal for the pump.

**Other surface equipment dependant on system**

• **Water storage tank**
  The tank will be made from polypropylene that is suitable for potable (drinking) water to ensure the taste of the water is not affected. The tank can be installed above or below ground.

• **Water Treatment**
  The quality of water and minerals supplied by boreholes may sometimes require treatment, typically for bacteria or sediment but sometime for other chemical parameters. This will be determined by your water analysis.