

The Scope of Works

How the Borehole and Irrigation System will work

Water will be abstracted from the Borehole by a Grundfos Borehole pump - SQE 2-85. Water will be pumped and stored in an Enduramaxx 10m³ tank. When water is needed to prepare the Cricket ground, another pump will supply water to the Irrigation System, with 8 pop up sprinklers providing water to the Cricket square to enable ground preparations to take place. The system is similar to that used at the adjacent Dragon Park and Newport Stadium (both also located at the Newport International Sports Village site)

The Scope of Works

Based on the Hydrogeological Assessment undertaken by Aquifer Energy Ltd., the following scope of works will be required to install the Borehole.

The geology encountered can differ in depths or structure which may lead to changes of drilling techniques. All works will be carried out to the Well Drillers Association regulations of which IGNE, the chosen Contractors, are members.

Current legislation allows for the extraction up to 20,000 litres of water a day in England and Wales without the requirement of an Abstraction Licence. As the maximum tank capacity for the Project is 10,000 litres and usage will be infrequent, an Abstraction Licence application will not be necessary.

The Contractors working days are 0800-1800, Monday to Friday and occasionally on a Saturday too. Work is expected to take 7 days.

Based on the Hydrogeological Assessment carried out for non-licensed abstractions, a detailed breakdown of work to be undertaken when drilling the Borehole will include :-

- Mobilisation of rig and equipment. To include; Rig, 30m of temporary casing each way
- Mobilisation of drill crew. To include; vehicle and 850cfm compressor
- Drilling of the Borehole - 200mm diameter. Maximum of 30m per diameter of temporary casing can be installed
- Set up rig on Borehole position
- Drill borehole from 100m to 150m
- Drill in temporary steel casing - 200mm diameter
- Drill in permanent sacrificial casing - 210mm diameter - 0- 10m
- Drill in permanent sacrificial casing - 210mm diameter - 20- 50m
- Install 125mm diameter PVC Screen and Casing to BSc220 standard - 1mm slots - gravel filtration pack and cementuous seal 100m to 150m
- Install with graded filter pack. 100% annular volume allowed for
- Install a cement seal. 100% of seal volume is allowed for with bentonite seal
- Supplement to install with Boode Select PVC screen and casing - compliant to BS6920, Reg 31 and KIWA.
- Borehole Installation
- Mobilisation of pump crew (2)
- Borehole installation crew (2)

- Grundfos Borehole pump - SQE 2-85
- Rising main in bore
- Cable in bore
- Control Unit - Constant Pressure Unit
- External Electrics
- Concrete plinth, insulated GRP lockable cabinet
- Pressure cylinder
- Fittings and control valve
- Laboratory water analysis
- Well head
- Enduramaxx 10m3 tank HIAB offload Inc Base
- Day works - Inspection pit digging, waiting for or collection of water, fetching materials, monitoring water strikes, blowing the borehole and all other works unrelated to drilling that may be required on site.



Photograph of an example GRP borehole installation.



Photograph of the actual Borehole Pump to be housed in the GRP cabinet

Final Installation

Once the borehole drilling has been completed, the borehole will be lined with DWI compliant PVC screens and casing and a gravel/recycled glass filtered pack installed around the slotted sections of screen and an impermeable seal to prevent any downward migration of surface or near surface contamination.

Borehole installation

Pump technicians will install the borehole pump, lay a concrete plinth and site an insulated, lockable glass reinforced plastic cabinet on top to protect the well head and its internal components. The borehole will be sited as close to the water delivery point as possible to reduce any friction loss via the plumbing. The borehole pump will require a 4-6amp supply and can be connected via a standard

3 pin plug. All arisings will remain on site and will be used to enhance the Borehole site area through landscaping, paying attention to improve the Biodiversity of the site. *Please refer to attached document Community & Environmental Benefits*

Water Analysis/Filtration

During the Test Pump, a water sample will be taken and sent off to the laboratory who will conduct a standard water analysis test. Upon receipt of the lab results it can be advised as to whether it is necessary to filter or treat the water for irrigation purposes only.