

# PUMP IT UP

Probably the biggest investment a golf club makes, outside of a new clubhouse, is its irrigation system. It might not be something that's used every day, or even every month, but Course Managers would invariably describe it as one of their most useful tools.

But an irrigation system is only as good as its pump station so making sure it is working efficiently is incredibly important.

There are three types of pump station that can be used on a golf course. There is the controller controlled pressurisation of mains which doesn't carry pressure until it is programmed to do so then it takes around five minutes for the pressure to build up. The other two are both pressurised mains systems, one a standard pressurised system, while the larger systems offer variable frequency control which means it only supplies enough water to perform the task it's been asked to do.

"The first two systems are ideal for nine to 18 hole golf courses which run one or two pumps but the variable speed pumps are ideal for larger facilities with more than one golf course which perhaps run three or four stations at the same time," explained Martin Hinchliffe, of North Staffs Irrigation.

"The particular pump station that a club needs is determined by the enormity and complexity of its irrigation system."



Once the correct station has been selected location becomes an important issue.

"The fundamental thing about pump stations is that you need a water supply and you need an electricity supply and those two things dictate what you are able to do," explained Martin.

If a golf club is in a remote area it might only have a 240 volt supply and that puts constraints on the type of pump you can have. A regular 18 hole course wishing to cover greens and tees will require a capacity of at least 4.4kW.

A club may decide that it wants its pump station beside the maintenance facility and not next to the clubhouse but if the club has three phase electricity but the maintenance facility only has single phase, which is often the case, a three phase cable would have to be run from the clubhouse which adds to the cost of the project and has to be factored in.

The other main considerations for positioning a pump station come down to water pressure. Irrigation water is drawn from one of several potential sources – the mains; a borehole; a holding tank or reservoir; a pond or stream.

"The major problem we come across when drawing from a pond or stream is that the pump is, without exception, above the water source so the water has to be sucked up by the pump before it is delivered out of the pump and, in doing these two jobs, this means you lose pressure on the delivery.

"If the pump station is below the water supply and this happens in the case of a holding tank and with a purpose built reservoir, gravity helps the water into the pump so it doesn't have to do any work and retains its power for pumping the water out."

If the topography of the golf course is also unusual it can also cause problems. Even if the water source was not the issue there are elements to consider when it comes to pump pressure. "If you have a mountainous course and put the pump station on top of the hill you'd have pump pressure and gravity providing a lot of pressure at the bottom of the course. If you put the pump station at the bottom of the hill you'd need a lot of pressure to pump the water to the top of the course," explained Martin.

"Ideally the best place to locate the station would be the middle of the course, half way up the hill, because what you'd be looking for is a working water pressure of 8 bar – 120 PSI. Normally sprinklers work

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between 6 and 7 bar but if you get too much pressure it atomises the water jet so you wouldn't get the range you required from your sprinklers," he explained.

Silting is also an issue particularly from natural water sources like ponds and streams and filters should be fitted to make cleaning much easier.

One final consideration when it comes to locating your pump station is that curse of the modern day golf club – vandalism. If the pump station is too exposed and/or isolated it becomes a much more attraction proposition for vandals and they can cause much damage to the electronics. If your pump station is exposed try to make it secure as possible. If it does become damaged it's Sod's Law that it is just before Captain's Day, in the middle of a drought or just when you want to assist the success of your overseeding!

- **Always check out the available electricity supply before positioning a pump station**
- **Assess which type of system best suits the needs of the golf course**
- **Be aware that if you are drawing water from a pond or stream, or below the level of the pump station, extra pumping power will be needed**
- **Too much water pressure can cause as many problems as too little water pressure**
- **Try to ensure that the pump station is position at a half way point on the course in terms of height**
- **Take potential vandalism problems into account when position a pump station**

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## FIRST AID IN THE GOLF CLUB

BIGGA'S Health & Safety series produced by Xact



### Legal Requirements

No matter how safe the workplace or how well risks are managed, accidents can still happen. Members, employees or visitors may be injured or taken ill while in the Club or the Course and arrangements must be in place to give them some level of first-aid assistance as soon as possible. The Health and Safety (First Aid) Regulations 1981 put a legal duty on employers to make adequate first-aid provisions for their employees.

In addition to any legal duty and the moral obligation of employers to provide first-aid, there may be other additional benefits. Prompt first-aid is likely to lead to a faster recovery by an injured member, visitor or employee who may require less time off work.

Every Club should have a person delegated to take charge of the provision of first aid. The level of training required is dependent on the risks, the possible severity of injuries, the number of employees and the proximity of expert professional help.

High risk areas or activities e.g. chain-saw use, would be best served by a trained First Aider as any likely injury would be severe and prompt action may be needed to prevent death.

Lower risk areas/activities could be handled by an Emergency Appointed Person or Appointed Person. An Emergency Appointed Person would be able to help in situations of heavy bleeding or emergency resuscitation. An Appointed Person should limit their assistance to making the casualty comfortable and summoning medical assistance. There is also a duty to ensure that First Aid supplies are replenished as required. The name

of the person who provides First Aid should be prominently displayed in the Clubhouse and associated buildings.

### Advice on Treatment

Under no circumstances delay in sending for an ambulance if medical or nursing personnel are likely to be required. If you are administering First Aid, ensure someone else telephones for help.

First aid should only be administered if you are trained to do so. Persons not trained to administer first aid should not attempt to do so unless death is likely before trained medical personnel can take charge.

Above all, personal safety must always be a priority. There is little point in trying to save someone else's life if the likely result is two fatalities instead of one.

### The First Aid Box

First Aid boxes should contain a guidance card detailing the most important actions to follow as well as sufficient adhesive and wound dressing for the injuries envisaged.

### Records

Remember to make an entry in the accident book and that certain injuries are reportable to the enforcing authorities under RIDDOR.

### Minor Injuries

Where necessary, minor injuries can be treated by the casualty using materials from the first-aid box, but they must inform the Appointed Person or First-Aider and an entry made in the accident book.