



Water feature at The Manor House Golf Course

MAKING WATER A FEATURE

By Jackson House

The obvious success of a golf course is shown by the repeated visits of members and, although we cannot take away the importance of a good round of golf, water features can play an important part as well as providing attractive, environmentally enhancing areas, giving pleasure to all.

As with any large country house, a lake, constructed in full view from the residence is important and, an attractive water feature by the clubhouse can provide a tranquil area in which to enjoy a drink or lunch. A water feature can provide a very good 'first impression' and should be seen from the entrance.

Working closely with golf course architects, The House Brothers designed the three lakes and waterfalls for The Manor House Golf Course at Castle Coombe. It took a model of the proposed water areas to convince the architect and the client that it was worthwhile. The architect has since been heard to say that The Manor House Golf Course has the 'finest 18 hole' in the country.

Winter storage reservoirs for irrigation are, with global warming, even more important. In many situations it is possible to construct a reservoir which will also be an attractive water feature. Waterplants provide an attractive edge to any water feature and these will camouflage the waters edge when the levels drop a foot or so. However, in years like the 1976 drought, the greens must be kept watered and it does give the Environment Agency comfort if a golf course is irrigating from its own winter storage reservoir.

If the average 18 hole golf course is 120 acres with 0.5m (20") of rainfall this gives 240,000m³ (52,800,000 gallons) for evaporation, run off and restoring the water tables. To take advantage of this it may be possible to construct a reservoir at the lowest part of the golf course and, with a small submersible pump, pump up to a larger reservoir on another part of the course. With a more sophisticated submersible pump it could pump directly into the high pressure irrigation system.

Lakes and adjoining canals can be incorporated into the golf course to form attractive hazards and these can be either a 'love or hate' for some golfers, and a great deal of thought needs to be given to the design including the siting of the tees and greens.

An attractive 'canal type' linear lake along the contours may be possible on a golf course with a clay subsoil. This opens up the possibility of a canal which resembles a large river with weirs and bridges which, with imaginative design, can also be a feature of the golf course.

An island green is an outstanding water feature. It has been a long ambition of ours to design a 'floating green' which can be easily moved. It could also remain green in dry weather without irrigation.

The golf course at Pyrford (Near Wisley) has one of the largest areas of water features (25 acres). The design involved lakes constructed down into the water table with a submersible pump to lift the water to a large waterfall into high lakes running around the course in an attractive stream. This attracted the sand martins.



During construction at Pырford GC near Wisby

Water proofing water features can be costly if a complete liner is required. However, if there is clay in the subsoil this can be used to help waterproof to above the top water level. Bentonite, which is an inert 'fullers earth' can be used to waterproof the base of the lake, depending on the type of soil.

One of our most successful methods of waterproofing lakes is by using a 'bentonite Slurry Cut off Trench' which are installed in existing, leaking dams or around the lower sides of lakes. They rely on an impervious layer of soil under the lake which the bentonite Slurry Cut off trench is

excavated into. This method of waterproofing is relatively low cost and successful. It is interesting that a trench filled with bentonite slurry does not cave in. A bentonite slurry cut off trench can also be used to bring underground streams, or water courses to the surface.

Golf Courses can be a wonderful habitat for birds and wildlife to such an extent that some golf courses have been granted an SSSI status. An environmental lake can attract all kinds of birdlife and to see the swallows diving over the water is an attractive sight.

Although common waterfowl are the most common birds to be attracted to a new lake, occasionally a tufted duck or even swans will take up residence, which is wonderful. Dragonflies, watervoles and moorhens with their fluffy black chicks are also interesting inhabitants.

Although a golfer is concentrating on his game, to be in the natural countryside with views of a magnificent lake, surrounded by wonderful fauna and flora can only add to their pleasure. With the need for a 'greener world' and golf courses becoming more 'family orientated', the enhancement of the environment is even more important. Waterplants can also add beauty to a water feature. The depth of water is important with shallow water for the waterplants and deeper water, at least three meters, if stocking trout. The waterplants, especially phragmites can help a great deal in the balance of a pond by restricting the blanket



After construction at Pырford GC near Wisby

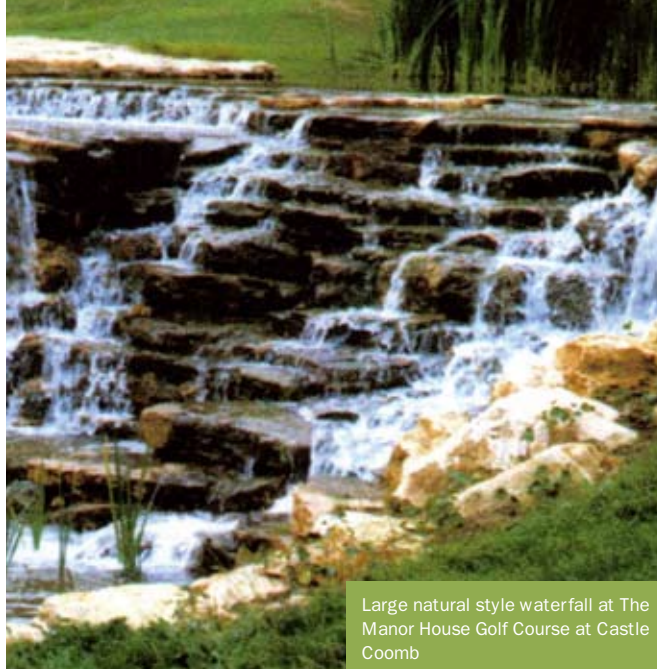
weed caused by high nitrates in the water, and helping to give clear, blue water.

A reed bed of phragmites, with the water seeping through the roots is a very effective way of purifying water. A large village in the west country are using this method to effectively purify human effluent.

If the golf course is experiencing problems with polluted water a version of the reed bed can be used to clean the water which could also be an attractive environmental habitat and may even attract reed warblers. Water has many other attractions, i.e. swimming Lake swimming on a hot summer day with a good expanse of water with no chlorination can be lovely. A jetty with ladder makes a good platform to dive from and climb out.

As consultants, it is interesting to see how the uses of water features can be combined giving, winter storage, irrigation, hazards for golf, environmentally enhancing for the wildlife and also to provide a beautiful view from the clubhouse and other sections of the course.

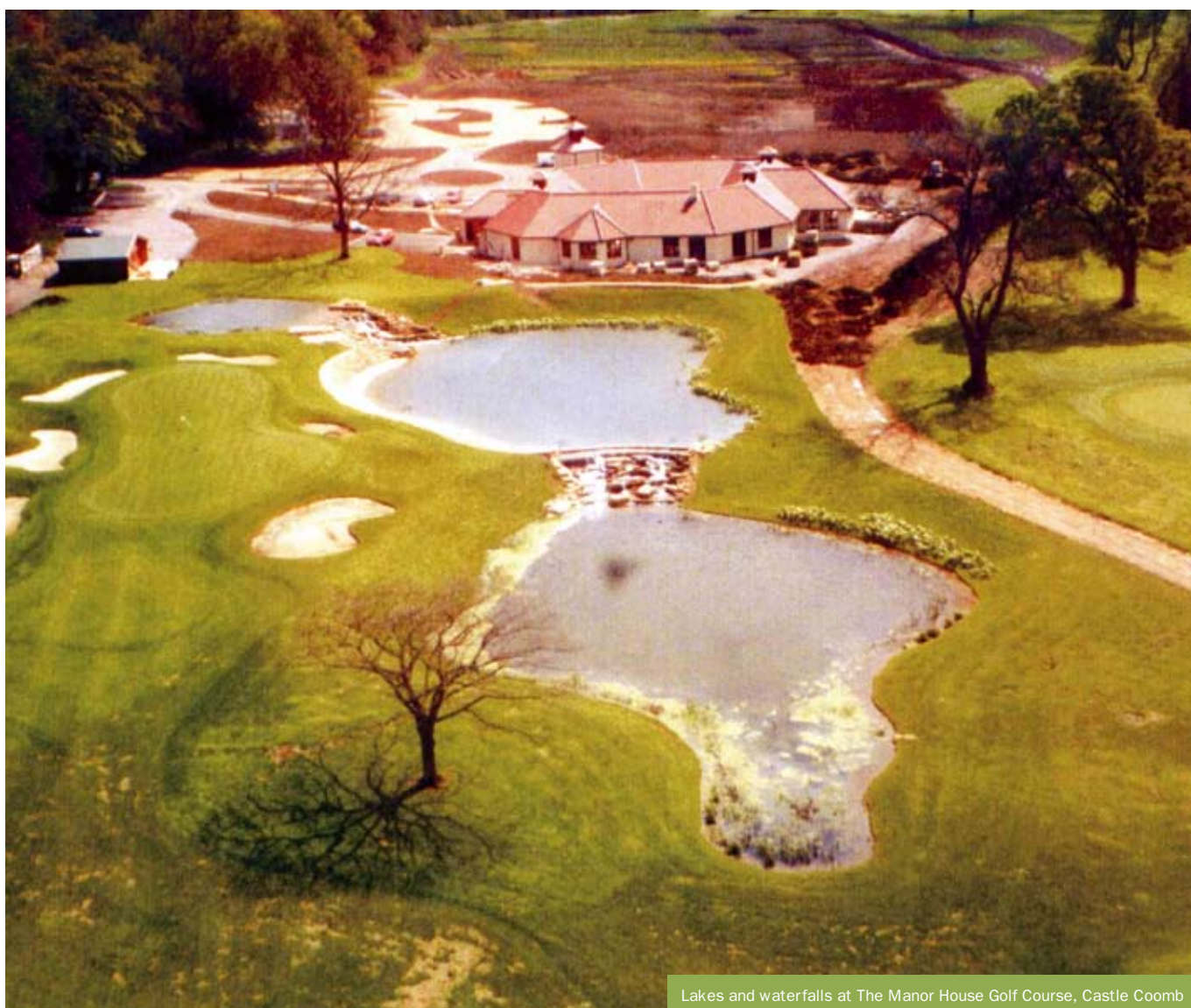
How to advise on how water features can help an existing golf course is a challenge especially when costs are important. When asked to advise we study the ordnance survey map of the area and the geological map showing the subsoils and the latest satellite photograph. These are combined with local knowledge and, most importantly, the requirements of the golf course personnel and greenkeeper, who will be aware of the drainage and irrigation needs is helpful.



Large natural style waterfall at The Manor House Golf Course at Castle Coomb

Our main criteria is to use the existing features as far as possible, which is cost effective and helps the water feature to blend well into the surroundings and look as if it had been there forever!

Jackson House is Managing Director of House Brothers Limited www.lakesandgolfcourses.com - 01935 433358



Lakes and waterfalls at The Manor House Golf Course, Castle Coomb