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.

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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 imperious 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 birds 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 phyngmites can help a great deal in the balance of a pond by restricting the blanket growth of algae. It is also interesting that a ‘bentonite Slurry Cut off Trench’ will not cave in. A bentonite slurry cut off trench can also be used to bring underground streams, or water courses to the surface.
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 01595 433358

As we approach the late spring and early summer months, consideration should be given to the effects of sunshine on the skin of people who spend an appreciable period of their working time outdoors during the day, or during leisure time spent outside e.g. gardening, playing or watching sports, holidays etc. As well as tanning the skin, ultra violet radiation in sunshine can also cause skin cancer which is one of the most common cancers in the UK. In recent years UV levels have been getting warmer with greater amounts of sunshine giving a corresponding higher risk from the disease. Diagnosis of the disease is rising each year. However, up to 80% of cases could be avoided with some simple precautions. The highest risk is when skin is exposed to direct sunlight but damage can occur even when it is overcast.

On average, people who work outdoors receive three to four times more UV exposure each year than people who work indoors. This cumulative exposure puts outdoor workers at greater risk of non-melanoma skin cancers, which are the most common forms of skin cancer in the UK. People who get sunburnt e.g. at work, while on holiday, gardening etc. also increase their risk of malignant melanoma, the most dangerous form of skin cancer. Those most at risk of skin cancer are people with fair skin, lots of freckles or moles or a family history of the disease.

Employers and other persons exposed to the sun should, whenever possible:

• Avoid unnecessary sun exposure at times between 11am - 3pm – this is the time of day when UV radiation is at its peak in the UK
• Plan outdoor tasks so that they can be done earlier in the morning or later in the afternoon, reserving indoor or sheltered jobs for peak UV radiation times in the middle of the day
• Limit each employee’s midday UV exposure where possible by rotating tasks with other staff
• Provide shade for workers to use, especially during breaks. If this is not feasible, encourage workers to find shade where it is safe to do so
• Encourage people to cover up
• Provide hats or appropriate headgear for workers to wear. Hats should ideally shade the face, neck, ears and head
• If hard hats are worn, consider providing extension flaps to protect the neck
• If your organisation has a uniform, this could include a hat, as well as shirt and long trousers
• Consider providing/using sunscreen
• If practical, SPF 15+ sunscreen should be available for outdoor workers to use
• Keep it in easily accessible places, such as tearooms, toilets or site offices
• Ensure you give guidance that for maximum benefit, sunscreen needs to be applied generously before being exposed to the sun and reapplied often
• Keep their workers informed
• Include sun protection advice in any routine health & safety training
• Encourage workers to check their skin regularly for unusual spots or moles that change size, shape or colour and to consult their GP promptly if they find anything that gives them concern – Early detection saves lives!

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A jetty with ladder makes a good platform to jump from. Around the Green
Lakes and waterfalls at The Manor House Golf Course, Castle Coomb

Features and irrigation needs is helpful. Combined with local knowledge and, most importantly, the requirements we study the ordnance survey map of the area and the geological map, a challenge especially when costs are important. When asked to advise how to advise on how water features can help an existing golf course is 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.