

Everybody has seen the sign 'Course Closed.' While it can often be down to the adverse weather it can also be an indication that a golf course needs improvement. Bettina Schrickel, student member of the British Institute of Golf Course Architects (BIGCA) and BIGGA examines this regular occurrence...

# Course closed



Above: Quality drainage should always be a priority

During the past years, the number of new courses has been rising faster than the number of golfers in many areas. This means that golf clubs now have to compete for members and green fee players and many clubs are having to improve to make themselves more attractive to potential customers.

The demand on the design and condition of golf courses has definitely changed since golf was played on natural Scottish linksland and maintained by grazing sheep. However, there are no rules for the perfect golf course and much depends on the individual golfer, whose opinion can be influenced by subjective reasoning - courses he has played in sunnier climes while on

holiday, or his own playing performance on a particular day.

It is often the greenkeeper who is blamed if the golf course at home does not look as green and beautiful as the courses overseas. Some golfers can't accept that it is not possible to achieve a perfect all-year-round quality of golf course in locations where temperatures can drop below 8°C for several months each year.

#### Reasons for improvement

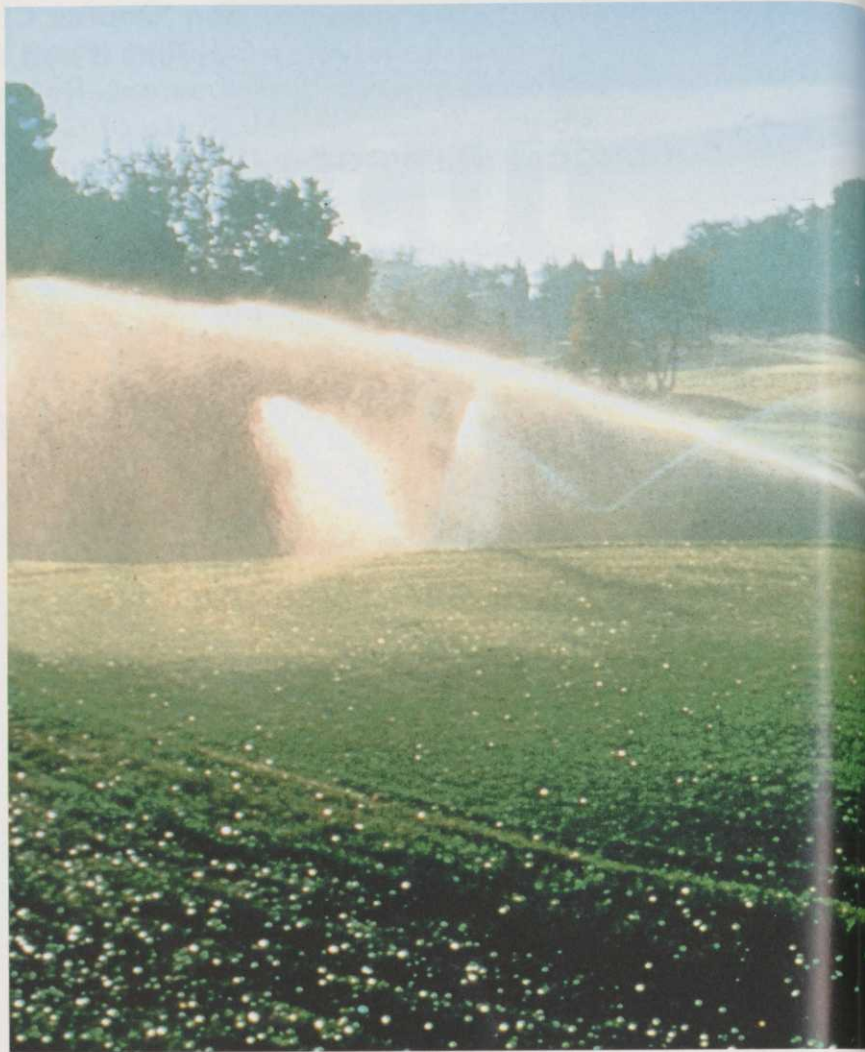
The question may arise why improvements and alterations do become necessary, even though money has already been spent for development and maintenance. A golf course is not a static entity; it is

a dynamic organic complex in a steady process of growth, decline and change, that we can notice over the years. Trees grow and change their sizes, as do the shapes of water edges. Formerly defined shapes and contours of fairways, greens and bunkers blur almost unnoticeably. Diseases and vegetative succession change the quality of the turf. Human factors also change the performance of a golf course.

Since the number of golfers started to increase enormously about 20 years ago, the number of rounds played each year increased as well. It was only in the 1960s that golf courses began to be constructed to specific construction standards. Until that time, greens consisted of



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Above right:  
Irrigation in action

Below: Poor bunker  
drainage leads to  
problems

soil or humus-based rootzones that were directly applied onto the subsoil.

The recent high volume of play and the replacement of hand mowers with heavier ride-on machines exceeded the capability of such greens. As a result, the greens compacted, the drainage ability and oxygen supply of the soil became insufficient, and the surfaces became spongy. A reduced turfgrass growth, diseases and wet spots are the final problems that can only be solved in the long term by the reconstruction of the whole green complex.

Renovation can also become nec-

essary when flawed maintenance practices have been carried out over an extended period. This can be down to poor irrigation; the use of heavy machinery in sensitive areas; the choice of unsuitable sand grain sizes for top-dressing and the filling of aeration holes and infrequent verticutting and deep aeration.

Compaction of the ground, naturally heavy soil and poor surface water drainage make the installation of an extensive drainage system essential.

Dry areas on the course require an extension or modernisation of the existing irrigation system.

The development of golf clubs and balls from hickory clubs and featheries to Big Berthas and Balata balls caused a significant increase in shot distance. That means that previously demanding golf courses have become too short, because hazards do not come into play anymore, or punish only the weaker golfer. It may be necessary to relocate the hazards or look to add length top the course in certain areas.

## Repair work and technical improvement

Repair work and technical improvements do not affect the design of the course and should not interfere with play. Minor repair works, such as the maintenance of drainage and irrigation systems or

the repair of bunker washouts, do not require outside contractors or a special budget, as long as they do not demand special technical skills or a great amount of working hours.

The greenkeeping staff is usually able to carry out minor repair work, and to include it into their maintenance schedule.

Technical improvements, such as major drainage and storm water management works, as well as irrigation renewal or expansion, are usually more time-consuming and require specific technical knowledge. A special budget is therefore necessary to cover the costs for outside contributors and materials.

## Renovation

Renovation serves to restore the complete functionality of a course and damage that has been caused by maintenance errors or the effect of wear and tear. Renovation often includes alterations that change the nature of the course or an individual hole. Greens, tees or other features that require improvement are often in such bad condition that an intensive maintenance programme would be ineffective, so that rebuilding is the only solution to achieve a high quality result, lower maintenance costs and to provide enjoyable golf.

When rebuilding a feature, the design should also be adjusted to







modern standards, while it is essential to preserve the harmonious appearance of the entire hole.

Drainage problems are a major issue in golf course renovation. They are just as large a factor in determining the quality of golf courses as the greens. Therefore, architects give priority to the construction of a sufficient drainage system, if the budget is limited, rather than make changes to the design of a hole.

#### Restoration

More and more historic golf clubs aim for redeveloping the original style of their courses. As we preserve other historic features in the world, we should also respect the historic value of those golf courses that were designed by the great architects of the past, because they document an epoch in the development of golf.

Such golf courses are often masterpieces, of which, unfortunately, the design of the majority has often been altered by less sensitive hands over the years.


A good architect will develop a plan which is coherent with the original style of the course, by analysing objectively the alterations and additions that have been done over the years, and providing design guidelines on how to restore the course to its original state.

#### Tree thinning

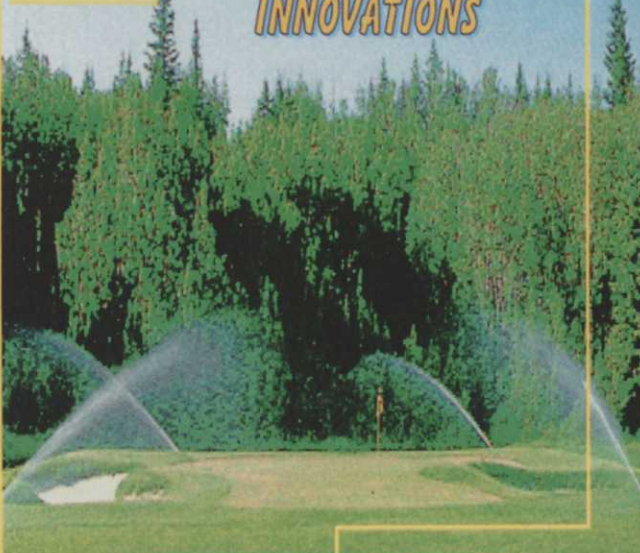
Overgrown courses with insufficient drainage do not allow the ground to be playable soon after heavy rainfall. Providing an extended drainage system is a fundamental step to solving the problem to a certain extent, but it is also necessary to revise the influence on air circulation and sunlight penetration caused by tree cover.


Mature trees are a gift to every golf course. They enhance the appearance of the course, determine its character, and form natural hazards. However, it may become apparent that trees need to be cut down, either because the shadow they cast impairs the growth of the turf, or because the formerly defined character of the hole has been lost due to their growth over the years.

These trees should be selected very carefully. The most sensitive way is to develop a tree cutting plan, in which those trees to be cut or pruned are marked. Not all marked trees should be cut at the same time because sometimes minor changes may lead to results that are greater than expected. Selective thinning of a tree can be preferable to removal in some cases. It is understandable that a tree cutting plan causes great discussion in a green committee's meeting. It might break some golfer's heart to see a beautiful tree go, but if the




## IRRIGATION INNOVATIONS



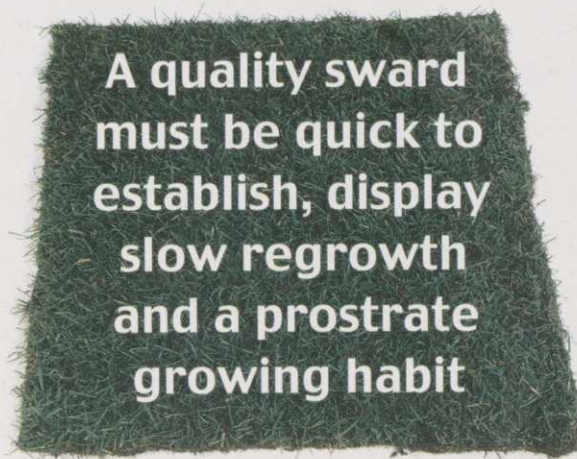


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Right: Fregate Golf Club, France

Below: A detailed architects drawing

purpose and the expected result is explained to him correctly, he will be able to understand and to be supportive.

### The role of the golf course architect

The architect has the creative abil-

ity and technical knowledge to provide a golf course that combines interesting play and high aesthetics, that is open for the longest possible playing season and that is easily maintainable. Co-operating with the greenkeeper is very helpful, as he knows his course and members from long term experience.

The architect can assess objectively what improvements should be done with regards to geographic site conditions and the nature of the course. He or she is able to evaluate which problems have the greatest impact, and to identify the best solutions with which to use the available budget most effectively. He will provide the club with a report describing the actual state of the course, an improvement-masterplan, detailed working drawings to site-specific construction standards, and the most effective work schedule.

To ensure a high quality product, it should be agreed that the architect also supervises the construction. A golf course architect can also form a link between green committee and greenkeeping staff.

### Work schedule

For financial reasons, and to offer an uninterrupted playing season to club members and green fee golfers, it is essential to keep a course in play while alteration work is carried out. Most golfers will prefer to play a different routing and on temporary tees and greens, rather than not being able to play at all. If there are alterations to be carried out on the entire golf course, it is recommended to work on no more than three holes at a time, and to provide winter greens if the green complex is being rebuilt.

To minimise the intervention, a realistic timetable should be established in which each working stage, the number of staff, and the required materials are listed. To avoid delays,

ensure that appointments with external specialists are made well in advance and that the materials will be ordered sufficiently early to be delivered according to the schedule.

The construction should always be carried out according to recommended construction standards. The quality of the materials should be regularly checked in a soil laboratory during construction.

### The maintenance aspect in the design

The appearance of a golf course greatly depends on the maintenance quality. I strongly agree with Robert Trent Jones who said: 'We can build the greatest golf courses in the world, but if they are not properly maintained, they are nothing.'

A professional golf course architect develops a design for which he takes the future maintenance budget into consideration and evaluates how much hand labour is suitable.

Steep slopes to be mown with fly mowers should be minimised on golf courses with low maintenance budgets, or be located in rough areas. Replacing sand bunkers or water hazards with grass hollows, rough, trees or other natural features reduces maintenance costs, but should be decided by the architect himself.

I recommend that the architect and the greenkeeper together develop a contour-mowing plan, as it can greatly increase the appearance of the golf course by emphasising the course of fairways or manipulating the perception of the severity of hazards.

The closer the relationship between greenkeeper and architect becomes, and the greater the understanding and respect for one another's knowledge and ability becomes - the sooner we will be able to create a 'course beautiful', and the less we will see the sign 'Course closed'.

