



King's Course, Gleneagles

# Making your course 'greener'

WORKING WITH  
NATURE

'Golf' and 'the environment' – words that are increasingly being linked.

With the Anti-Golf Group gaining worldwide publicity for its demonstrations in the Far East and now recruiting members in the UK, it's an issue that all courses need to tackle. In this special feature we look at three courses to see what they're doing and why.

## LINLITHGOW GC

David Roy, course manager at Linlithgow Golf Club, West Lothian, explains how and why he got involved in golf course conservation, and how you can allay your club's fear of environmentalists.

**M**y involvement with golf course conservation started in June 1992 when I responded on behalf of the club to an offer of a free species study to be carried out on the course. This study was part of a local initiative and the work was duly carried out by the Scottish Wildlife Trust (SWT) and paid for jointly by UK2000 and Scottish Natural Heritage (SNH).

It was during the species study that I found out that my knowledge of what was growing on the golf course was virtually non-existent. Merely walking round the course with the surveyors from the SWT I learned a great deal and I quickly became far more interested in finding out more about the local flora and fauna.

It was suggested at this point that this local initiative could be expanded into a national scheme promoting golf course conservation. This would take the form of each club in Scotland appointing a conservation officer to help the course manager draw up a wildlife management plan. The technical data necessary to produce a plan like this would come from the local Wildlife Trust or similar such body and once the plan was written it would be kept up-to-date and possibly modified by both the conservation officer and the course manager.

The honorary conservation officer at Linlithgow Golf Club at that time was George Anderson who I approached because he was already a member of the SWT. George worked very hard and collected a good proportion of the information required to draw up our management plan.

Unfortunately George retired to Southport but we were again fortunate in finding Crawford Smith who, like George, is a SWT member as well as being a member of the golf club. So with the combined efforts of Gill Smart from the SWT, George Anderson and Karen Morrison of SNH, we have created a conservation management policy for Linlithgow Golf Club which, if carried out correctly, will serve the club for many years to come.

It is interesting to note that the SWT have gained from the experience of working closely with a golf club and some long-held preconceptions have been broken down. It was common, for example, for environmentalists to suppose that golf courses used fertilisers and chemicals in the same manner and quantity as intensive agriculture.

I have now been involved with conservation for a little over a year and this time has just been enough for me to become acquainted with the necessary expressions that are commonly used by environmental bodies. For example, a species has various forms of rarity, and although northern marsh orchids may flower in profusion in many parts of the country, this plant may be classed as locally rare if found on your golf course. If it turns out to be the case



Linlithgow Golf Club

Photograph: Lorne Gill

that these orchids on your golf course are the only ones in a radius of 50 miles then this can count as a source of pride for the club as a whole.

There are many other apparently simple aspects to caring for the environment that will be learned from becoming involved in conservation, but most importantly it is the fact that wildlife habitats are disappearing all over the country and golf courses are a potential haven for many apparently 'common' forms of wildlife.

It is my opinion that Linlithgow Golf Club is representative of many clubs in Britain and the attitude of our committee to my involvement in conservation may well be similarly representative. Initially the committee only had to grant permission for the survey to take place, but when it became apparent that the club was a potentially important wildlife site the message to George and me was one of fear of the power of environmental legislation being used against any future expansion of the club. This initially implied to me that regardless of the rarity of the flora found on the course, this would willingly be sacrificed for the sake of some architectural tinkering with the design of the course.

It was at this point that I feel that we failed in bringing across the true meaning of what conservation means to Linlithgow.

Firstly, the legal power of environmental legislation is in reality minimal. Even the governmental quango, Scottish Natural Heritage, has to go through a complicated process of designation before there is any form of protec-

tion at all for endangered habitats and even then this is scanty to say the least.

Secondly, the very essence of this wildlife initiative is that by enhancing the wildlife of the course this will in turn increase the aesthetic value or "feel good" factor so often found on many of the great courses in Britain.

Thirdly, the cautious manner in which our committee approached the wildlife initiative simply highlights how important it is that the ideals of conservation are presented properly. It should be stressed that at all times the club has total and absolute control over the development of a conservation management plan. It is the club who will use the expertise of environmental bodies to improve the golf course. If there are areas of conflict between conservation and golf, the club will always have the last say in what happens in these locations.

At Linlithgow we have had to break down preconceptions on both sides of the fence, but the hard work put in by all involved will hopefully benefit not only future generations of golfers at our club but those wishing to follow our example.

I may add that my involvement with the Scottish Wildlife Trust has added a whole new dimension to my job which I enjoy immensely and I feel that many other greenkeepers would feel likewise.

## TEMPLE GC

Here is an edited version of the 45-page environmental report prepared by local conservationists for Temple Golf Club, Maidenhead, and its course manager, Martin Gunn.

**F**ollowing an ecological report on Temple Golf Club by the Sports Turf Research Institute, volunteers from local conservation

**Dead wood supports many species. Many of the interesting beetles, including two notable ones, were found under old beech bark at Temple Golf Club**



groups were recruited to conduct a year-long survey of the course.

The main aim of this was to provide a thorough record so that the effects of the management regime could be monitored accurately.

The volunteers from the Windsor and Maidenhead Urban Wildlife Group and the Berkshire, Buckinghamshire and Oxfordshire Naturalists Trust made more than 40 visits during 1992.

#### **They found:**

The predominant habitat, hardly surprisingly, is grassland. About 80 per cent of the 180-acre site is grassland of one type or another. Approximately 10 per cent is woodland, about 5 per cent is hedgerow and small stands of trees, and the remainder is the clubhouse, car park etc.

The grassland is over 50 per cent rough, 25 per cent semi-rough, 15 per cent fairways and about 2 per cent greens and tees. The rough is cut twice a year, in spring and late summer, with the cuttings removed to prevent the nutrient enrichment that encourages the more vigorous grasses at the expense of wildflowers. A few areas are left without any intervention. The semi-rough is cut weekly to about three weeks depending upon the growing conditions. They said these areas are "particularly species rich and form the most important feature of the course in nature conservation terms". They noted the fairways are cut at least once a week to keep the grass less than 2cm high, but artificial watering and chemical treatment are kept to a minimum. Seaweed extract and trace minerals are used to promote growth.

They found there were three main areas of woodland: Mungden Wood is predominantly mature beech wood; Badger Wood is more varied, has a much better shrub layer with an attractive line of hazel, wayfaring trees and other shrubs; Bypass Wood is predominantly mature beechwood and litter. Clumps of trees and some large single specimens dot the course. There is also a line of trees or hedgerow round most of the course, but this has become straggly and overgrown in places. Most of the old hedge has now been coppiced and the gaps replanted with suitable native species to provide a double hedge in future years.

Few birds were spotted, reflecting the lack of suitable habitat: hedges of low conservation quality and the absence of an understorey in most of the woodland. But 22 species of butterfly were recorded, which is excellent for this part of the country. The numbers and diversity of beetles and bugs was also good.

Several rare species of fungi were found, including *Coriolus hirsutus* and the first recording in Berkshire of the continental form of the Hoof fungus.

Over 200 species of flowering plant, mostly perennials, were recorded. The most amazing find was the number of orchids, both the number of species and the number of actual plants. "On the basis of the orchid population alone, parts of Temple merit scheduling as a site of special scientific interest," said the report. In the long rough more than 200 green-winged orchid plants were found, including a pure white variant. More good finds were made on the edges of the woodland areas – including several species of violet, wood spurge, spurge laurel and a few primroses.

No special study was made of mammals but evidence of badgers and foxes was found, although no badgers or foxes were actually seen.

#### **The recommendations:**

Essentially more of the same. The conservationists applauded Temple's minimal use of fertiliser and irrigation because the natural vegetation is adapted to dry and quick draining conditions, so excessive irrigation would only promote unnatural species and fertiliser runoff could alter the species balance in the roughs. Weedkiller treatment should be strictly limited, and a policy of spot weeding only if necessary should be used on the fairways.

They said encouraging birds will help control turfgrass pests and earthworms, and that the use of persistent and highly toxic vermicides should be avoided.

When the roughs and many of the semi-roughs are cut, the cuttings should be removed to prevent nutrient enrichment that would encourage the coarser grasses and weeds. A potential problem was noticed at the edge of some fairways where cuttings were left over an area rich in orchids.

They suggested omitting the spring cutting of some roughs to avoid damaging the cowslips and green-winged orchids. They were also concerned about the damage done by machinery and buggies to the orchid rich edges of some fairways. "If the fairway along the edge of Mungden Wood could be nar-

rowing by a metre or so and the cutting frequency decreased, the damage would be reduced. The present fairway width could be retained by extending its northern edge where the semi-rough is of less botanical interest."

A plan to leave an area of rough near the Bypass Wood uncut to allow the scrub to extend should be abandoned as the lower growing grassland there is considered higher in value than the potential scrub. Twice-a-year cutting should be resumed.

They also recommended more frequent but less extensive cutting of the leg of scrubby grassland running between the edge of Bypass Wood and an established scrubby copse beneath some pylons which was cleared occasionally by the electricity company, leaving helliborines overexposed to sunlight in the first season or two after clearance. The new regime, they say, "would provide a better balance between the needs of the plants and the utility".

As for the woodland, the report warned against being "excessively tidy" as a lot of conservation value comes from the dead and

**• Few birds were spotted, reflecting the lack of suitable habitat... but 22 species of butterfly were recorded – excellent for this part of the country...'**

dying trees and leaf litter. Grass cuttings left to rot under the trees may promote nettles rather than more varied woodland floor vegetation.

Unsuitable species in the copses, such as the turkey oak and sycamore, should be gradually eliminated and replaced with more suitable species, such as hawthorns and roses.

Some patches of nettles IN FULL SUN should be retained for butterflies. Some of each clump can be cut back in early June for tender regrowth to support second broods in July. Golfers are often more tolerant of nettles tucked away in shady places, where they will still support various invertebrates but they will not support butterflies.

Odd corners should be left unmanaged. Some rotting stumps or 'holey' trees should be left in woods near the car park and first tee for nesting marsh tits and woodpeckers.

Bird and bat boxes could be put on the buildings around the clubhouse and in Bypass Wood. But, remember, different types of boxes attract different types of birds.

# GLENEAGLES

*Gleneagles is cutting down nearly 200 trees – on advice from environmentalists. It's part of a plan to return the landscape to how it was when designer James Braid created the King's Course 80 years ago. Jimmy Kidd of Gleneagles Golf Developments explains what they've done and why.*

At the same time as Gleneagles Golf Developments were putting together an environmental management plan for the estate and three golf courses, they were carrying out an 'historical audit' of the courses.

The objectives of the audit were:

- Identify alterations over the past 70 years, reasoning and timescale;
- Investigate possible weaknesses in the golf strategy and natural experience;
- Define current problems with regard to safety and maintenance;
- Examine the championship status and requirement;
- Propose possible improvements and alterations;
- Estimate costs;
- Indicate possible timescale for realisation of proposals.

The study of all available historical information indicated some fairly major changes in the length, par and golf strategy over the years.

It also became evident during the historical audit that vegetation had forced golf strategy



alterations. Encroaching and invasive species, such as broom, whin and gorse, which is exceptionally good to look at when it's in flower, was having a serious impact upon the golf experience.

A detailed examination of each hole then took place, taking into consideration the environmental management plan for the entire

830-acre estate. As part of this plan we:

- Identified all sites of special and scientific interest – (20 sites exist);
- Set up 'control' and 'experimental' botanical monitoring quadrants to assess changes in vegetation. (There are 13 selected sites with 2 sq m control plots and 2 sq m experimental plots alongside. A botanist analyses the

When James Braid designed the King's and Queen's courses at Gleneagles, the land was covered in grass and heather. It remained that way until about 25 years ago. Then the courses were opened all year.

So what? you're probably thinking. Opening all year meant not using it for sheep and deer grazing in the winter. The sheep and deer used to nip the heads off the alien broom, whin, bracken, rowan trees and silver birches, whose seeds were probably introduced by birds.

"I look back at aerial photos from ten years ago and there's nothing there, and I look at it now and it's just an absolute mass," according to Gleneagles' Jimmy Kidd.

Research shows that as close as 1958-1968 there were no rowan trees on the golf course, very little bracken and only a little gorse and whin. But in recent years it has gone out of control, altering the strategy of many holes. The 1st hole is a prime example

In 1921 it was a 355-yard par 5, dog-leg right to left with two bunkers on the right side of the fairway and two guarding the green on the left. It was a relatively simple opening hole with a very wide fairway. Sketches of the hole at the time show there was little or no scrub on the right

side. The strategic drive, therefore, was played to the right to open up the green for the approach shot.

By 1974 there was no longer a dog-leg, the bunker count had increased from four to nine, the length had increased by just seven yards and the par had decreased from 5 to 4.

Closer examination reveals much of the reasoning behind the major strategic alterations was due to the severe encroachment of invasive

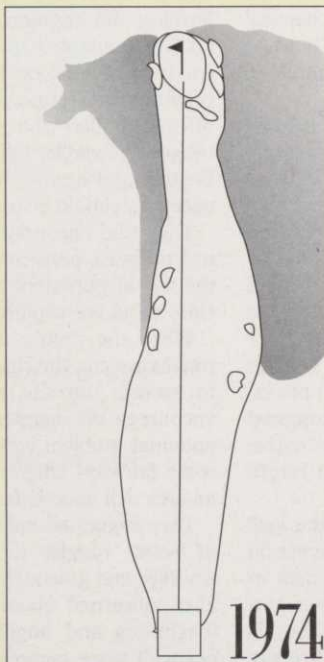
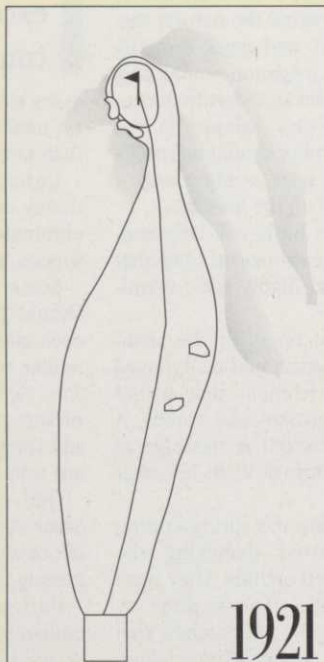
broom/whin, gorse, rowan and bracken on both sides of the fairway. As a direct result of the loss of the dog-leg strategy on the right side of the hole, it was deemed prudent to incorporate THREE new bunkers on the left side as most golfers now preferred that route. This in turn forced strategic changes to the right side of the green and two extra bunkers were incorporated to catch the typical shot – slightly pushed out to the right.

A comprehensive environ-

mental plan and historical audit many years ago would have identified the problem and subsequent investment in construction and development of a new strategy would have been avoided, along with the extra daily maintenance burden of five new bunkers.

The removal of the invasive scrub, which is now being done, would have restored the original architectural concept. At Gleneagles, they now make it policy for everyone to understand James Braid's original concept. Not all of it is valid with the modern game, but only when you understand what the architect was trying to achieve on each hole can you say what is relevant today and what is outdated.

Says Mr Kidd: "You can only properly maintain a golf course if you have a perfect understanding of the architectural concept. I see too many green-keeping errors created because the superintendent doesn't have a good understanding of a) who the architect was and b) what his concept was. Once you understand that you can make up your own mind whether you want to retain it because it's useful or discard it because it's outdated. And at least when someone asks you why you're doing something you can explain it."



Left, the 1st and right, the 15th at Gleneagles' King's Course



## WORKING WITH NATURE

variety, type, size, and quantity of plants inside the squares and compares the results with previous years. He then produces a conclusion which may indicate a slight modification of maintenance practices);

- Established future management prescriptions;

- Produced a vegetation map, identifying scrub invasion to the detriment of golf strategy and the aesthetic appeal of the courses;

- Conducted ornithological and entomological surveys to find out what we've got, what we want and what it takes to keep those species.

An essential element of our plan was the establishment of a monitoring group, comprising professionals in ecology, botany, geology, Scottish Natural Heritage, a member of the hotel staff and, most importantly, a respected member of the local community.

The monitoring group meets twice a year to

assess the impact of our golf courses and estates management practices and consider future management plans and prescriptions.

When these plans are formulated, it is important to communicate these to all staff, members, guests and visitors.

Awareness is probably the most important thing when it comes to golf and the environment. Firstly you have to make the greenstaff aware of what you're trying to do. In our case it was mainly why we're controlling scrub invasion (see panel). Communicating the

problem to the greenstaff means they can go out and eloquently explain why we're getting rid of "those beautiful shrubs and trees" when asked by guests, members or hotel staff.

### Conclusion

*Awareness is the key. Awareness of what you've got on your course and how to keep it there (or not). Awareness among the greenkeeping staff of what*

*you are trying to achieve, so they can make members and others aware of what is being done and why.*

*Golf courses, old and new, are becoming increasingly important as models and reminders of how beautiful and wild our countryside can be, whilst still performing a very necessary commercial leisure role.*

*Long established courses must make special efforts to retain their habitats and new courses have the potential to develop into beautiful and valuable wildlife areas.*

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