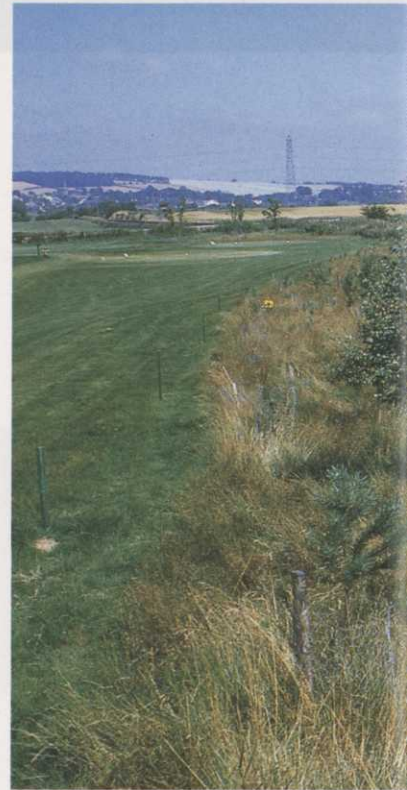


Elmwood College's 18 Hole golf course has recently achieved a unique environmental double. Earlier this year the course became the first UK golf course to receive the ISO 14001-environment award and at the same time was awarded the Scottish Golf Course Wildlife Charter. Master Greenkeeper John Quinn, who is Director of Elmwood Golf Developments, explains what makes the Elmwood course special.

Back to nature



Above: John Quinn

It would have been easy for me to go through the long list of management objectives and environmental projects that go to make an ISO14001 award, but it would not make very enjoyable reading. In any case to do that would be to miss the point of the award entirely. ISO14001 is awarded in recognition of a well-planned, facility wide, integrated approach to environmental management. The management system is far more valuable to the environment, the customers and employees of the facility than the sum of its constituent parts would be. The most important thing to bear in mind at all times is that we did not set out to achieve an award, we set out to bring environmental awareness into everything we do at Elmwood College and Elmwood Golf Developments.

The Golf Course

Elmwood golf course was constructed in 1995/96 and opened for play in August 1997. It is an 18-hole course built on ex-arable and pastureland and includes full USGA Specification greens. The course was built primarily as a training resource for Elmwood's 450 or so greenkeeping and golf course management students who attend the college annually. However, the learning experience is made even more realistic for the students by the fact that the course is a fully operational commercial golf course with 700 paying season ticket holders. The course will typically see around 30,000 rounds annually, and is open on full greens and tees for the whole 12 months of the year.

The course is maintained by a full time greenkeeping team of six and has a state of the art machinery fleet and PC controlled irrigation system both supplied by Toro. Some of the environmentally sensitive management practices, which have helped the course towards ISO 14001, are as follows:

IPM

Integrated Pest Management, although the buzz term of today, describes a method of turf management that many UK greenkeepers have always used, they just haven't written it down in a formal management programme. At Elmwood we take a very long-term view of turf management and how it effects the overall environment of the course and its surroundings. IPM means managing your turf for the long haul and not just looking for results for the next big event or members medal competition. This means assessing the turf condition and then doing

what is required to make it, or keep it, healthy. We are not anti-pesticides, but there are no pesticides on the market that do turf or soil any good. All pesticides cure the symptoms, not the root problem. Plants and beneficial soil fungi interact in symbiotic relationships, which help the plant to obtain the nutrition it needs. Broad-spectrum preventative fungicides are not selective in which fungi they kill; they are by definition effective on all fungi. The same can be said for most pesticides.

Even at Elmwood, however, there is a place for pesticides. We do use some herbicides, mainly totals on paths or new construction areas and occasionally selectives applied by spot treatment to problem weed areas on fine turf. We have never applied an insecticide, but we did have to spot treat greens with a curative fungicide in February 1996.

This low pesticide input has not occurred by accident; everything we do is geared to maintaining a healthy soil/plant relationship. Cultural practices are to the fore. On our USGA greens we topdress as lightly as we can set the machine, every 14 days during the main growing season. These applications are so light that they disappear with one pass of the brush and the effect on play is hardly noticed. Thatch build up is controlled by this continuous dilution with rootzone material.

During the summer we spoon feed





greens and tees with liquid fertilisers (16.0.9 NPK fertiliser with trace elements and with a seaweed supplement added) every 10 days. In autumn and winter a granular fertiliser (3.0.22 NPK) is applied once a month. Total nitrogen input on greens is 220 kg/Ha per annum. Soil phosphate is adequate, so there is no need to add more. Potassium inputs reflect the sandy nature and low CEC of the rootzone. On USGA spec rootzones the CEC is generally low and spoon-feeding programmes work to supply the plant with the nutrients it needs when it needs them.

In dry weather, irrigation follows the maxim of 'Deeply not Daily' and the roots go all the way down to the bottom of the rootzone. Hand watering of hotspots conserves water and prevents the greens from losing their firm and smooth surface.

Greens are mowed at 5mm in summer and 7mm in winter. This generally amounts to five cuts with pedestrian mowers and two by triple mower per week. This helps to minimise perimeter wear and tear. If dry patches appear we hydroject and apply a wetting agent with the hand watering applications. Hydrojecting also goes on throughout the season on walk off areas and any other compaction black spots.

Conservation

Conservation was prominent also right from the start of the project,

with an Integrated Golf and Conservation Management plan being drawn up before a sod was turned. This was a prescriptive plan following the Scottish Natural Heritage format. Some of the projects arising from the plan have included planting eight hectares of rough, indigenous grasses such as sheep's fescue, hard fescue and highland bentgrass. These areas have been managed by mowing and removing clippings twice or three times per year in an effort to reduce the fertility of the rich agricultural land they are planted on. This programme is now beginning to show results and the roughs will now be left to regenerate naturally with only one cut per year. On the more impoverished areas we will begin planting wild flower plugs this autumn with plantings of gorse and broom also contributing to the overall conservation value of the site.

Over 25,000 trees and hedgerow plants have been planted as part of the project and these have been drawn from a short list of native species also. These are primarily as follows: Scots pine, birch, ash, rowan, hawthorn and dog rose. Most of the trees were planted as saplings and are supported through the Forestry Authority Woodland Grant Scheme, while Scottish Enterprise, through the Contract Grow Scheme, has supplied all the trees on the course.

Dry-stone walls have been left in place wherever possible to reflect the

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course's previous use as farmland. We leave the course boundaries and out of play roughs to regenerate naturally with no management input and

this has paid dividends in the number of species present on the course. Elmwood came second in Scotland in the Bird Watching Ryder Cup in

1998 with 56 species spotted, not bad for a newly-opened course built on previously barren arable land.

Among those species were four 'top of the food chain' raptors; buzzard, sparrowhawk, kestrel and barn owl which are a good sign that the entire eco-system is in a healthy, thriving state.

This autumn will see the completion of our first five-year plan and the start of the next one, which will have many more measurable conservation and environmental objectives.

Of course we did not achieve the ISO award through the work on the golf course alone. The ISO 14001 recognition is a facility wide award and includes the clubhouse, maintenance facility, offices and everything else that makes the business tick. Some of the initiatives here include recycling; used oils (engine and cooking), filters, grass clippings, pesticide containers, paper, glass and aluminium cans. Energy conservation is very important also, consider energy saving lights, regular machinery servicing and buildings insulation



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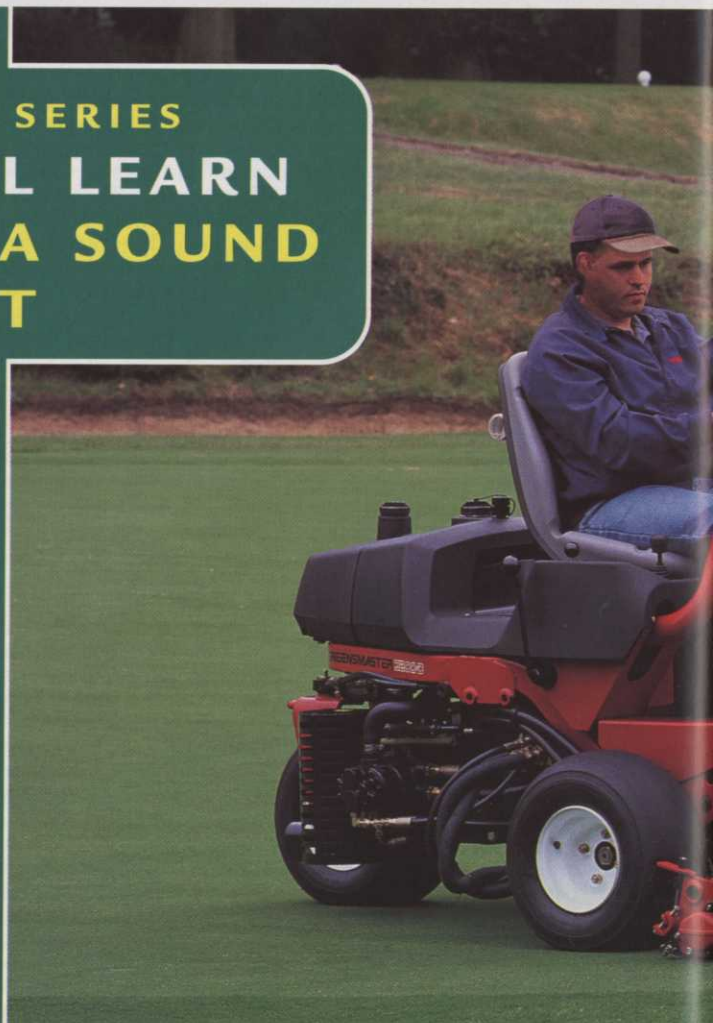
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and glazing. Staff members are encouraged to switch off lights and appliances when not required. Don't leave your PC switched on all day (take care with irrigation computers!) and switch off lights when leaving a building or area.

So what is the next stage? Well, although we didn't set out to win awards, they are a useful focus to help achieve targets and goals in this type of work. The next obvious step is to try to achieve the pan-European Committed to Green Award and we are working diligently on this project at the moment. I would encourage all Course Managers, Head Greenkeepers and club officials to do likewise. Golf courses are the green lungs of many otherwise concrete cities, they can be important wildlife sanctuaries and they are an insurance policy against the land they occupy being developed for industry or housing. A minority of golf courses have given the entire golf course industry in Britain a poor environmental image, which it does not deserve, so let's show the sceptics that we are all committed to green.

The Elmwood environmental initiative is a team effort and thanks are due to Stuart Macdonald, Team Leader for Conservation Elmwood College, John Salter Environment

Officer Elmwood College, Jonathan Smith Scottish Golf Course Wildlife Adviser and the entire Elmwood Golf Developments team.

