



Two integral cogs in the workings of golf

by Bob Taylor, Ecologist STRI

What an excellent show BTME turned out to be. All of the seminars I was involved with were extremely well attended, the practical workshops were filled to capacity and the show itself surely must have encouraged record levels of entrants. The STRI stand was certainly full to bursting most of the time, with a considerable amount of discussion being devoted to ecological aspects of golf course development and management.

It could, I suppose, be argued that greenkeepers were being polite realising my interest in discussing their course and what has been achieved, but I did on several occasions throughout the early part of the week during dinner, etc. overhear people discussing ecological issues such as how many trees have been planted and how raising the cutting height on areas of grassland has improved the course. Comments including, "Members didn't like it much at first" and "I was nearly hung for chopping that tree down" were also overheard. Greenkeepers did appear, and I am sure they are, genuinely interested. Indeed, I have always said that to the greenstaff, managing 'through the green' is a hobby, an interesting extension of their workload and a break from some of the more tedious operations

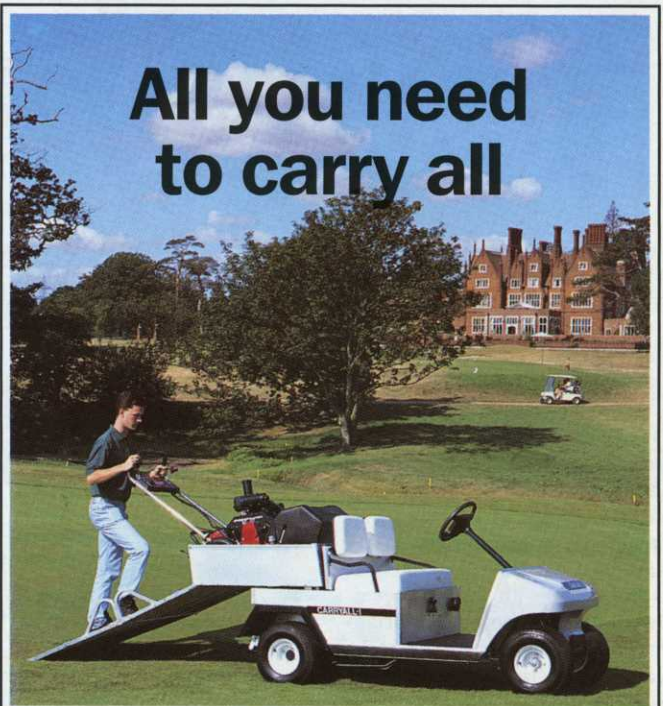
one could mention.

It was also interesting to note how most of the seminars during the week came round at some point to the need for sensible rough management.

Larry Gilhuly (USGA) showed the results of a members' questionnaire, and the environment came high on the list of their expectations of what constitutes a good course.

Bunkers were a major talking point. Why do we need so many? Answer, we don't - we could achieve far more from a sensible approach to using the grasslands, eg. semi rough, grassy hollows, the heather, water features, ditches, ponds, etc., if club committees and members should be brought around to this way of thinking. Education therefore will over the next few years be essential in this area and must be an important step in the way forward.

Talking of the way forward, I discussed at length the importance of the environmental management plan as a baseline for management. The plan will identify what can be found and how it will change given different management regime. It will form a baseline for monitoring, assessing gains and interest. Indeed, it is only by this approach that the wider environmental bodies, the general population (public), etc.



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will appreciate that golf is not a selfish use of the land, nor is it a pesticide dump and reservoir of toxic waste, as reported in certain press.

So, where do we start?

THE FIRST STEP

Setting up a Management Plan

The first step will involve an initial assessment of the course to classify the vegetation types. The plan must use the data collected to formulate an overall goal, determine the most appropriate targets and management techniques. Directing the management in this way will help to ensure that any money spent is used to the best effect, to ensure the most efficient use of the land and the resources to improve the course for play and for wildlife. Any target must be realistic, "ambitious" possibly and quantitative in terms of habitat and species quality and extent. A major aim must be to recognise the need to halt naturally occurring deteriorating referred to by ecologists as "succession" (eg. scrub invasion) and to retain habitat quality alongside the management of the playing surfaces.

A thorough site investigation will be a prerequisite towards the production of a long term management plan. The management strategy for the course must be practical and sustainable as the programme, more than likely, will be carried out by the greenstaff during appropriate periods using hired or club labour and machinery. If the management tasks being proposed are not practical or indeed affordable, then the project is unlikely to be sustained into the longer term.

The initial assessment of the course should be undertaken by a qualified ecologist with relevant field experience in applied ecological management and indeed the workings of the golf course. The Head Greenkeeper should be present for at least part of the assessment period so as to gain knowledge and reasoning behind the types of work being recommended.

The inspection of the course with all interested parties should provide a full description of the site and detail areas of impor-

ance while outlining and reiterating the main focus of the study.

The study should: (a) describe the site through collation of available physical and biological information; (b) identify objectives and purpose of course management; (c) realise conflicts and achieve the best means of resolving them; (d) detail management strategies to achieve objectives; (e) identify and detail scope for monitoring (auditing).

The above objectives form part of the N/SVQ Greenkeeper Training Certification (Level 3) under the mandatory additional tasks within the Supervisory Section. These include: (a) Monitor and survey (b) Collect and record data (c) Analyse, evaluate, interpret and report.

Monitoring thereafter is an essential component of any management planning.

It will be necessary to detail and demonstrate the degree and effectiveness of the management programme and the likely timescales involved. It may be that the work fits into a phased timetable utilising periods within the year that tie in with the greenstaff's annual works programme. Equally, timing of the works will be essential if wildlife losses are to be avoided – it is of no benefit to clear a pond during the height of the breeding season, far better to implement the work when this is over but before the onset of the colder winter period. Phasing the work, ie splitting the water feature arbitrarily into portions, and carrying this out through just one portion each year will allow wildlife the chance to move safely as the work progresses. Undertaking the work in this way will ensure that

habitat and species continuity and sustainability are maintained and encouraged.

The concept of sustainable development is an integral component of ecological management. There is little point in encouraging wildlife by initiating ecological/ course improvements if the management regime necessary to sustain it cannot be maintained year after year.

The management objectives, if they are to survive long term, must reflect club policies and must be compatible with them. A further aim of the assessment should be to help club communication, ie between club officials and members and outside, to improve the course image within the wider population. Drawings and details of conservation work posted within the clubhouse and around the course on notice boards together with periodic informative evening discussions will all help to raise members' awareness of conservation management and may help to protect one or two areas from excessive trampling damage (heather-dominated carries, for example, are particularly sensitive).

The above will give an evaluation of the golf course which can then be monitored, enabling subsequent changes to be made to "fine tune" the management programme as and when required. It will help give priority to some tasks over others but, most importantly, will offer in a practical way a long term management strategy for the course that is readily achievable and affordable, both in terms of the greenkeeper's time and the financial budgets of the club.

A management plan can all too easily become heavy with detail and format, and it is essential, if the end user (the greenstaff) is not to be put off or lack confidence in deciphering it, that the plan compartmentalises the detail away from the important management prescriptions.

In management programmes we have to think long term and to define what will be required over perhaps five to ten years. We also have to quantify what is likely to be needed in terms of the four M's: Men, Materials, Machinery and Money.

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The objectives of management therefore must be clearly defined at the outset. Thoughtful planning and consideration must be given to the requirements of individual species present within a given habitat type and to the requirements of animal or plant communities whose interactions are fundamental to the successful workings of the habitat. A major objective must therefore be to maintain or improve conditions within the vegetation types for communities, forestalling further losses or possibly extinctions. For example, where there are populations of red squirrel, it is important not to affect the balance of tree species which could render the site more attractive to grey squirrels. The native red squirrel is now such a rare animal that if any golf course has a population, it would be highly advisable to take whatever steps are required to ensure that this attractive and popular rodent is encouraged. This may be encouraging a greater diversity of conifers to maintain a more constant food source (red squirrels eat conifer seeds) while retaining low numbers of deciduous trees. This indeed may be the converse of what may be generally thought the most appropriate form of management!

Each habitat found on the course would be represented in the management plan. It will

be necessary to highlight the importance of tree removal alongside tree replacement, or infrequent grassland management within areas of deep rough. Management within and around water features may involve infrequent desilting, vegetation clearance and maintenance of water quality. On heathland sites, heather management will be of major importance, together with the removal of scrub and naturally regenerating tree species.

Monitor and review

Monitoring is an essential component of management planning. The management plan should encompass periodic ecological audits of the course to assess the degree of conformity and the extent to which the desired objectives set up for the individual areas are being achieved. The period for repeated audit-

ing will vary to some extent according to the sensitivity of the site. Although an initial review should ideally be undertaken within the first three years, varying thereafter, repeated monitoring will be of considerable importance in areas supporting potentially invasive plant species, such as bracken, birch, rhododendron, Japanese knotweed or Himalayan balsam.

Site, species or habitat monitoring should be followed with a "review" of the management plan. Following changes on site, it may be necessary to update or modify the management plan. One of the main benefits derived from the monitoring and review process is the possibility of being able to improve upon the management techniques being used as knowledge of the most appropriate methods continues to develop and improve.

Given the interest that is now apparent through the golf industry towards ecological and environmental issues, it may be worth stating that BIGGA have been instrumental in the production of a practical guide to ecological management and accompanying video showing management techniques in action. Both are available from Aldwark Manor. STRI Golf Ecology Services are available through Bob Taylor, Ecologist with STRI who can be contacted on 01274 565131.



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