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Rough Management: Nature or Nurture?

As a golfer who has spent all his professional life working in the environmental business, I have long been bemused by the antagonism often displayed by conservationists towards golf. It has always seemed to me that such feelings were frequently at odds with the facts, and over the past 15 years I, along with others such as **Bob Taylor** and **Lee Penrose** from **STRI**, have put a lot of effort into trying to change these perceptions. Yes, there may be some instances where environmental damage has been caused to important wildlife features, but these days the situation is very different, with the majority of golf clubs being well aware of their environmental responsibilities, and with many taking positive action to do something about it. This has been recognised and acknowledged by conservation bodies, from the national statutory agencies (Natural England, Scottish Natural Heritage, Countryside Council for Wales) to the voluntary sector (the RSPB and the wildlife trusts). There are many good examples of co-operative working between golf clubs and such bodies, and Clubs increasingly appreciate that managing roughs for wildlife fits easily within the normal work practices of green staff, and can save money. It's much cheaper to maintain areas of scrub, grassland or heather than to retain it as amenity grassland mown at least once a week.

So the relationship between golf clubs and environmentalists is now generally good, with many Clubs managing important places which are Sites of Special Scientific Interest (SSSIs) or European Special Areas of Conservation (SACs), in ways which are well regarded by conservation bodies. Indeed, over 100 golf courses in England are SSSIs, and nearly half are SACs, including the Open Championship venues at *Royal St Georges* and *Royal Birkdale*. It has taken hard work both by golf clubs and environmentalists to reach this position, whereby golf courses are making significant contributions to the delivery of many of the wildlife targets within the UK Biodiversity Action Plan. This can be through managing habitat such as heathland, meadow grassland, links grassland, scrub, woodland and wetlands, or through direct action to benefit important species of plants, animals, birds and invertebrates. However, golf club managers are now increasingly facing a dilemma. Most of the management of roughs until recently has been through the use of traditional cultural methods, such as cutting, scarifying, harrowing and the like. This has been well received by environmentalists, as it is in keeping with the ways that such habitats have been managed for decades, and with the way that most nature reserves are managed. However, in the last couple of years, golf clubs have had access to new tools for such work, in the form of chemically based methodologies which are now attracting the interest of greenkeepers.

Such approaches have been in use on greens, tees and fairways for many years, and were probably one of the main reasons why conservationists were uneasy about golf courses. This concern eased over the years as the products became more sophisticated, and the ways they were used became more controlled. It also became apparent that, generally speaking, areas of rough and out of play areas were not impacted by chemical use on the playing surfaces. This situation is now changing. There are now products designed to manage

grasses, and their use is increasingly being promoted in areas of rough, to remove aggressive grasses and allow their replacement by the finer species. Such results can already be achieved through cultural methods, albeit ones which do require dedicated effort over time to achieve the required result. The attraction of the chemical approach is that it may be easier and quicker to achieve. But introducing use of chemicals into areas of rough and semi-rough puts at risk the good relationship built up so painstakingly between golf clubs and conservationists, because of the broader impacts which may well occur. That would be unfortunate, and to the advantage of neither.

The concerns are several. Prime amongst these is the fact that wildlife does not exist in isolation. There are complex and often poorly understood inter-relations between species, and the habitats in which they live, with the effect that what may on the surface appear to be simple cause and effect relationships are generally far more complicated. These 'ecosystem-scale' effects are difficult to understand without detailed investigation of the assemblage of plants, animals and habitats which are present at each place where a chemical compound is used. For example, using a product which removes a particular plant from an ecosystem will have direct effects on the species which may rely on that plant for food, breeding sites or living spaces. In addition, the species which depend on that plant are likely to be prey items for other species. These complex food webs require detailed study in order to understand how they operate at any particular place; this knowledge is unlikely to exist in a golf course situation, and so using such a product is likely to have unknown consequences.

There is a statutory approval process which all new substances have to go through, looking at their impact on a range of species. However, the process looks just at direct effects on a small range of species, and does not (indeed cannot) assess the wider impacts on ecosystems and food webs of using the substance, which means that down the line effects are not investigated. This leads conservationists to have concerns about the unknown impacts of using such chemicals in the roughs and semi-roughs.

Further, there is an additional complication if the golf course lies within or adjacent to an SSSI. These sites have strong legal protection, and the use of pesticides and other chemicals within them is illegal unless a specific consent has been obtained from Natural England, Scottish Natural Heritage or Countryside Council for Wales. In England most, if not all, of the 100 plus golf courses which are SSSIs will have received consents to allow the use of chemicals on tees, greens and fairways, but these consents do not permit use of chemicals in the roughs or semi-roughs, and any such application without a specific consent would render the Club liable to prosecution. Conviction carries the possible penalties of a fine, and a requirement to restore the land to its previous condition. Clearly, this would not be a desirable outcome for a golf club, and carries the risk that years of good relationship building between the golf industry and environmentalists is destroyed. Any golf club with an SSSI should consult with the relevant statutory agency if they are considering any activity of this sort. There is another consideration too. Planting of wild flower mixes, to produce colourful displays in the summer months and provide additional pollination sources for insects, are becoming popular. Whilst this is unlikely to be an issue in areas currently lacking ecological interest, it needs much more careful assessment if the planting area lies within an

existing area of semi-natural habitat. This is because it is important that the existing character of such habitats is not radically changed, through introducing species which previously did not exist there. Such actions can distort the existing ecological balance, and give rise to unanticipated changes. For example, introducing plants which require lime-rich soils into naturally acidic areas is unlikely to be successful, and introducing wildflower mixes into areas of heather is ecologically undesirable. Successful ecological restoration or enrichment is most likely where the planned changes are in keeping with the receptor site, and this is likely to require specialist knowledge or advice. Also, if any such actions are considered for a golf course within an SSSI, they would also require specific consents from the statutory agency.

Indeed, should a golf club want to take actions to improve or modify the ecological character of its roughs, it would be wise for it to make contact with either the statutory body (if an SSSI is involved) or the local wildlife trust, to seek expert advice. In my experience, such an approach is likely to be well received, and many such clubs have benefitted from developing relationships of this sort. The Local Biodiversity Action Planning process is now well established in the UK, and golf clubs could benefit from engaging with this through receiving assistance and advice to help with on-site initiatives. It is also often the case that golf club members have directly relevant skills and knowledge, and are keen to help out with surveys to identify the presence of characteristic species within the golf course area. Some have even gone as far as to produce information displays on plants and animals that members can see on their course.

These days there is a substantial amount of information available to help Club and course managers plan and implement wildlife improvements on their property. **The R&A** has published, jointly with the RSPB, a comprehensive practical guidance manual on managing habitats on golf courses for birds, and this is available through their website at <http://shop.randa.org>. **England Golf** has its Greener Golf initiative (<http://www.EnglandGolf.org/greenerGolf/>) an interactive website which provides high quality golf-specific environmental advice to golf clubs in England. **Scottish Golf** has established a dedicated section, the Scottish Golf Environment Group (<http://www.sgeg.org.uk/>), which helps Clubs in Scotland address environmental issues. **The Golf Union of Wales** (<http://www.golfunionwales.org/>) publishes a model golf course management policy for Clubs.

At a time when we are all experiencing the impacts of global climate change, along with the increasingly unpredictable weather patterns which this causes, it pays to be aware of the environmental importance of roughs and out of play areas on golf courses. In the southern parts of the UK, population growth and development pressure has led to the loss of extensive areas of formerly high quality semi-natural habitat, and the fragmentation into small blocks of those areas which remain. Golf courses fulfil two key roles in mitigating these effects. A large proportion of the long established Clubs have retained the original nature of their properties, especially the original habitats which characterised the area, and as development has gone on around them, they are often now the only places in an area where extensive areas of the preexisting habitat still remain; hence the designation of many of them as SSSIs. In addition, new golf developments built over the past 20 years have tended

to be constructed on farmland, which by virtue of the increasingly intensive nature of modern agriculture had tended to support only sparse wildlife.

These new courses often include new ecological features, such as lakes, ponds, grasslands and managed woodland, which has increased the stock of habitat available, and delivered positive environmental benefits. Such areas also act as important stepping stones spread across intensively managed landscapes, and provide important staging posts for wildlife. The UK's golf courses support large areas of high quality wildlife habitat, and are at last receiving the recognition they deserve for this. Rather than seeking chemically-based ways of addressing perceived problems, and risking undermining the good relationships with environmentalists developed over recent years, I would encourage Clubs to engage more closely with local environmental organisations, to find appropriate ways to deliver wildlife outcomes in a sustainable way.