GREENER COURSES WITH COMPOST

Photo by Richard Castka (Sportspix International)

A WRAP guide to using compost on golf courses

Keeping golf courses in great condition is a year-round challenge for greenkeepers with weather, location and soil quality all significantly affecting the look and playability of a course.

Photo by Richard Castka (Sportspix International)

Keeping a course free from water logging, yet also lush and green, can be achieved through the introduction of drainage and irrigation systems. However, there is another, more natural method of keeping courses in great condition, one that is growing in popularity amongst the UK's greenkeepers – compost.

Compost produced from garden waste such as grass cuttings, prunings and leaves can be used on golf courses in a number of ways:

It can be used to **establish and renovate turf** as well as being applied as a **top dressing**. When establishing or seeding turf, compost should be applied 25 - 50 mm deep and then incorporated to an approximate depth of 100 - 150 mm. Once the compost has been mixed into the soil, a seed bed can be established by lightly brushing seed onto the surface.

Compost can also be used as a top dressing for turf. It can be blended with other materials such as sand to make it suitable for applying to closely-mown fine turf, and fine grades of compost – screened to include particles no larger than 5mm - are available especially for this purpose. Recent scientific trials carried out by the Sports Turf Research Institute (STRI) and Glendale Services in partnership with WRAP found that, for best results on golf courses, compost should be applied between early March and early April using a grade of no more than 10 mm for fairways and less than 5 mm for greens. The trials also concluded that compost should be applied at no more than 6 litres/m2 (60 m3/ha) per dressing and, importantly, costs were found to be comparable to using a long term controlled release fertilizer product.

Divots on golf courses can be filled using a blend of compost and grass seed mix. The compost contains nutrients and holds moisture, and the dark colour helps absorb heat from the sun, speeding up germination.

Composting is known to have been a part of life in China since 2000BC and today a growing number of sports turf professionals are looking to compost to help with their turf care needs. Greenkeepers and groundsmen can be confident about the quality of compost available, thanks to a compost certification scheme introduced in 2002. BSI PAS 100 was adopted by the Composting Association (TCA) as the specification that compost producers must meet in order to be allowed to use their logo, and there are now over 65 sites registered on TCA's BSI PAS 100 Certification Scheme with a processing capacity of over one million tonnes.

COMPOST IN ACTION

Sherborne Golf Club

Sherborne Golf Club, overlooking the beautiful Blackmore Vale on the border of Dorset and Somerset, is over 100 years old. Part of the original 18 hole course was designed by the famous Scottish golfer James Braid, who is credited with the invention of the 'dogleg'.

However, when Chris Watson was appointed as course manager nearly three years ago, he discovered that a beautiful location is no guarantee of good soil.

Soil conditions in Dorset are variable throughout the county, with large areas of stone and sand making it difficult for the soil to retain nutrients. Back in 2000, two greens in particular had been laid with poor-quality turf that was failing to thrive. Chris realised that what was beneath the turf was a major part of the problem. The root zone was composed almost entirely of sand which was unable to hold any nutrients for growing the grass above.

"Before we could do anything about the quality of the turf," says Chris, "we had to address the quality of the ground below."

Good, nutrient-rich topsoil is at a premium in the area because of the sandy nature of the local soil. As an alternative, Chris decided to use compost produced from garden waste such as grass cuttings, prunings and leaves from a nearby assured supplier. When incorporated into the soil, compost both acts as a fertiliser and improves its physical properties. It releases nitrogen, phosphate and other nutrients into the ground, which keeps turf healthy and reduces nutrient leaching.

Chris lifted the turf from the two affected greens. The first green was spread with just compost from local supplier, Eco Composting Ltd, to improve the quality of the soil, and a mixture of compost and sand was applied to the second green to build up its contour. Greens 1 Organic topdressing was used on the second green – a mix of five parts sand to one part compost supplied by specialist horticultural supplier White Moss Amenities. A total of 35 metres^3 was applied.

The greens were then re-laid with new turf at the end of September. The turf established successfully in a short space of time, enabling the greens to be playable again by the following June. Chris was so pleased with the results that he went on to use compost as the base for two new tees.

"Tee areas on a golf course need to be level and free draining as this gives a good playing surface even in wet conditions," says Chris.

"Using a sand and compost mix helps to ensure this, making it the ideal material for constructing tees at Sherborne."

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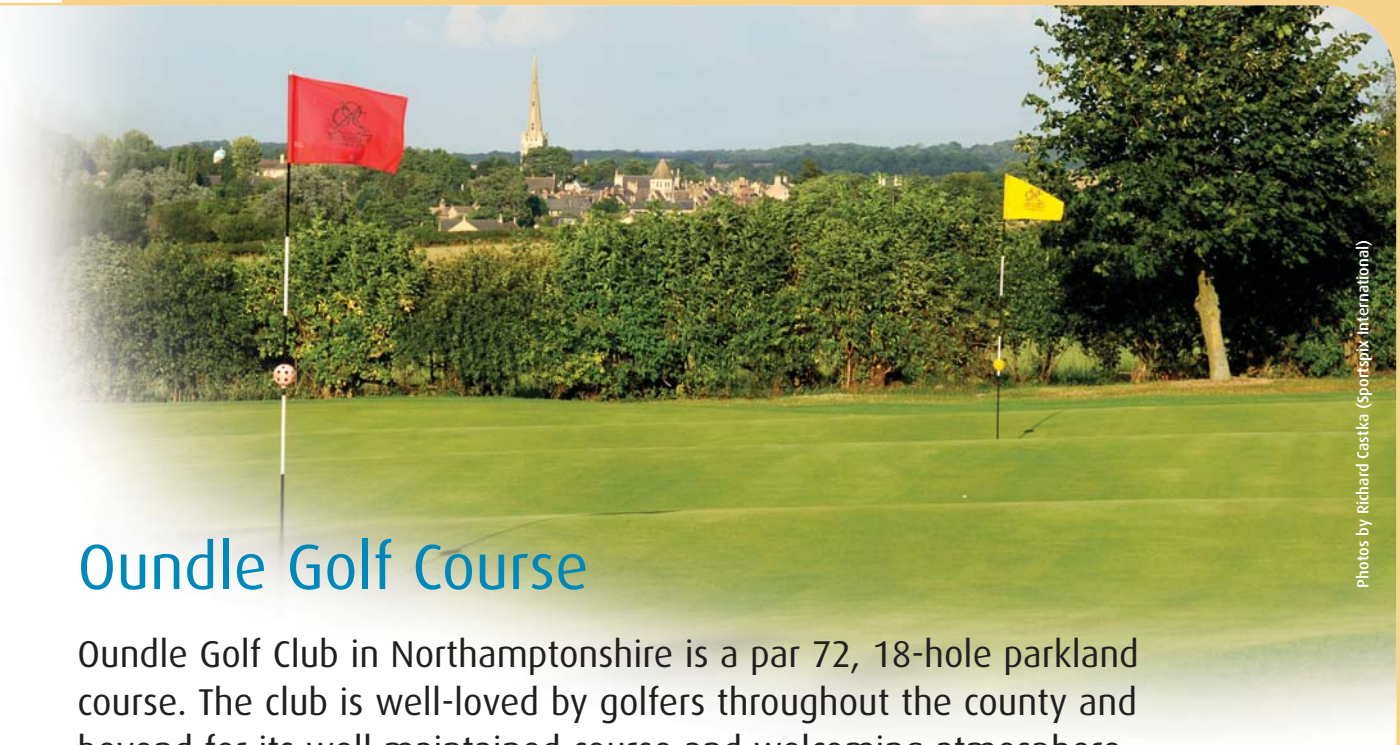

Photos by Richard Castka (Sportspix International)

Oundle Golf Course

Oundle Golf Club in Northamptonshire is a par 72, 18-hole parkland course. The club is well-loved by golfers throughout the county and beyond for its well maintained course and welcoming atmosphere.

The team at Oundle is always looking for ways to improve the course for its members and visitors and decided to introduce compost made from recycled garden waste as a sustainable and commercially sound way to maintain the quality of its fairways both now and in the future.

In 2003, the Course Committee, under Course Chairman Mike Schofield, decided to trial compost as a topdressing on Oundle's newest fairways. They were prompted to do so by David Stansfield, an Independent Agronomist, after discussing the heavy clay nature of the soil, its lack of structure and consequent problems with both drought damage and slow drainage.

David explained:
"Organic material can be really effective for stabilising grass cover and for significantly restructuring the soil. And with an abundance of well processed, certified compost now available, it has been made extremely easy to source."

Boughton Loam Ltd supplied Oundle golf course with the compost. They applied 25m^3 of pure compost to each hectare of land as a topdressing to a depth of approximately 15mm.

Compost was applied to ten acres of fairway on four holes. Using automatic cyclone spreaders, three applications were made using approximately 80 tonnes of compost to condition the soil. The most recent application was in late autumn of 2004 and the golf course is still enjoying better quality of play because of healthier grass growth and better drainage, helping the course to better cope with the adverse effects of severe weather.

Dave Foley, the General Manager, said, "We have experienced a big improvement in playability over the past few years because of the improvement in grass quality. We now have consistency in grass content and finish across the fairways and things like 'tufties', when members claimed a free drop if they were behind a tuft of grass, are a distant memory."

Club members and visitors are also enjoying longer 'summer' fairways because of improved soil quality. The nutrients provided by compost have led to faster and stronger grass growth than in previous years and this has resulted in the fairways achieving a better playing surface at an earlier point in the year than ever before.

The team at Oundle has also extended its use of compost to help build the course's tees. Five tees have already been repaired using a mix of compost and soil to great effect and the plan is to incorporate its use into tee refurbishment as and when necessary.

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Benefits of compost

- **Nutrient source**
  Compost contains slow release nutrients such as nitrogen, phosphate and potassium, plus useful amounts of other minerals – all of which reduce the need for inorganic fertilisers and help to improve the density and colour of turf. As a result, grass remains green without excessive growth or need for increased mowing.

- **Disease suppression**
  Compost includes beneficial micro-organisms which may suppress many turf grass diseases such as Fusarium Patch (Microdochium nivale), Red Thread (Laetisaria fuciformis), Dollar Spot (Sclerotinia homoeocarpa) and Brown Patch (Rhizoctonia solani) - particularly when applied as a top dressing or a root zone amendment.

- **Reduces need for watering**
  In dry conditions, the absorbent nature of compost helps to conserve water – this means that turf will stay greener for longer through summer months with less need for regular maintenance.

- **Improved turf establishment**
  Compost is an excellent source of organic matter, giving soil a more workable structure which leads to enhanced drainage, improved root growth and better plant and turf establishment.

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Photo by Richard Castka (Sportspix International)

FOR MORE INFORMATION:

Grounds managers, groundsmen and greenkeepers across the UK are increasingly turning to compost to address all kinds of turf care and landscaping needs. Further to the examples provided in this booklet, WRAP can offer a full range of case studies from golf courses that have already benefited from using compost. Their stories can be accessed via the WRAP Organics website www.wrap.org.uk/organics

Details of where to find a supplier of PAS 100 quality compost can also be found on be found on the WRAP Organics website or you can call freephone 0808 100 2040 for more information.

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