



Burning is a great management tool and if planned well can have great environmental benefits for the golf course now and into the future

Rising up from the ashes



Environmental management expert Kate

Torgersen looks at the benefits of prescribed burns in managing and promoting native vegetation areas on golf courses.

Evidence suggests that fire was a part of the Australian landscape long before the existence of human beings. It appears that with the arrival of humans over 50,000 years ago, the frequency of fire may have increased. Aboriginal people used fire skilfully, managing various areas to sustain their own survival and that of future generations. They used fire as a tool for a variety of purposes such as hunting, warmth and cooking, to encourage grassland development in some areas and also to increase the abundance of plant foods and animals.

Prescribed burning is a common and valuable management tool that is widely used within several industries and on golf courses worldwide. In the past it has not been a common practice within the Australian golf course industry (apart from a few select courses), however, with many clubs putting greater focus on their native areas they are now looking at different management techniques.

In this article we will look at how fire can be used on your golf course, the benefits it can provide and some great examples of courses that use fire as a regular maintenance tool. We will also provide some



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practical guidance on when you should burn, how often you should burn and how to conduct a burn.

FIRING UP

There are many reasons why prescribed burning should be considered as a management tool. It can be used to;

- Stimulate native seeds to germinate;
- Encourage regeneration of native indigenous species;
- Reduce, and in some instances eradicate, weed species;
- Preserve the health of certain species;
- Rejuvenate habitat for many animal species; and
- Reduce biomass (allowing golf balls to be found).

In saying that, depending on your situation and habitat type, fire can also be a disadvantage, so you should always consult with an environmental expert to determine whether it is an appropriate course of action.

Royal Melbourne Golf Club has been using fire as a management tool over many years. Speaking with present day head horticulturalist Stuart Moodie, he can remember his first involvement with burns on the course in April 2000. Burns were conducted on a regular basis until the drought period hit in 2004, at which time it became difficult to obtain a council permit. It wasn't until 2013 that the club was able to obtain permits again and reinstated yearly burning programmes.

"A lot of our remnant heathland is in the direct line of play for golfers, whether it be carries in front of tees or around bunker edges, so there is always

pressure from the golf play aspect," says Moodie. "These areas are maintained by trimming them once a year to around slightly less than half a metre high.

"Over time the larger shrub species, such as *Leptospermum myrsinoides* and *Banksia marginata* etc, can become quite woody at the base. This makes these areas harder for golfers to find their balls and even play a shot out of them, with the possibility of doing an injury to themselves. By burning such areas periodically it helps remove the woody structure of the plant, making the fresh growth softer and more player-friendly."

Burning has played a huge part in preserving the highly significant remnant heathland areas at Royal Melbourne. This practice has given greater opportunity for smaller plants, such as herbs or wild flowers co-existing amongst larger plants, to have their time in the sun for a couple of years, whereas previously they would be shaded out. Within this region there are many rare orchid and heathland species that can only be found on golf courses.

In Sydney, soon to be retiring New South Wales Golf Club superintendent Gary Dempsey introduced fire as a management tool in the early 1990s to help control noxious Bitou bush and regenerate the endangered Eastern Suburbs Banksia Scrub (ESBS) plant community.

The club now has a fire regime that coincides with the National Parks & Wildlife Services Recovery Plan for the Botany Bay National Park. This regime sees a burn take place every eight to 15 years, but no longer than 30 years. Since the regime has been in place, there has been a more than 90 per cent reduction in Bitou bush and substantial improvement in the quality and diversity of the ESBS plant community. Golfers are barred from playing in the areas that have been burnt until such time that the club deems it has recovered sufficiently, so the impact of golfers is negligible.

Mosman Park Golf Course in Perth also uses prescribed burns to preserve the health of its beautiful stand of grass trees.

CONDUCTING A BURN

Many factors should be thought about when assessing an area for a burn – is the area remnant; how old is the area; what types of vegetation are found on the site; is it going to have a decent native seed bank; do I have the resources to manage the area after the burn; and can I safely perform the burn without putting anyone in danger and without it becoming out of control.



Burning usually occurs through autumn and spring, however, timing will vary depending on your vegetation type and species. In Victoria, for example, autumn is a perfect time to burn heathland on sandbelt courses.

If you are considering conducting a burn, here are the steps you will need to follow;

- Identify the burn area.
- Contact your local council. Local councils will require you to submit a form to obtain a permit to burn. Depending on the size, location and permit conditions, the local fire brigade;
- Once the permit has been obtained, the area may need to be cut down to dry out the fuel (this is usually three to four weeks depending on the species).
- Communicate your plans to members.
- Before the burn takes place, make sure you follow any requirements set out in your permit (e.g.: contact the local fire brigade 24 hours before the burn).
- Conduct the burn.

One of the most important tasks after the burn is to regularly weed the site. By not maintaining the site after the burn it can potentially become infested with weeds. Patience is also needed and while you may see signs of regeneration as early as a week after the burn (generally grasses), it may take longer for wild flowers, shrubs and other species to start to emerge. The wait will be well worth it.

How often you should burn the same site will vary depending on vegetation type and can be anywhere from five to 25 years apart. In the cases mentioned above, Royal Melbourne will burn the same site on a five to seven year rotation, whereas at NSW it is every eight to 15 years.

Regardless of what the timeframes are, burning is a great management tool and one that can work well for clubs. If planned well it can have great environmental benefits for your course now and into the future. 🌱



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NSW Golf Club in Sydney has used prescribe burns to great effect to control noxious Bitou bush and to help regenerate stunning stands of the endangered Eastern Suburbs Banksia Scrub plant community