



Intense preparation work at Oakmont

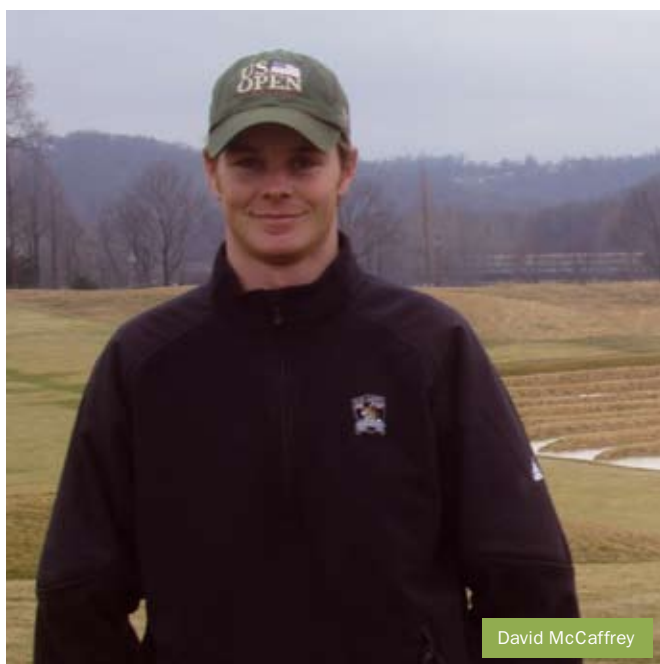
THE BUILD UP TO A MAJOR...

Intern, David McCaffrey, takes you through the meticulous preparations and work that has gone on at Oakmont in preparation for the US Open

This year's US Open venue, Oakmont Country Club is one of the oldest and most traditional courses in America.

Throughout the early years of the club's history, club founder and architect, iron and steel magnate, H.C. Fownes would watch fellow golfers play, take note of where a bad or mishit shot ended up, then get the greenkeeper to construct a bunker in that area. Over the years the number increased to 320. Fownes only ever designed one golf course and it is amazing to think that over 100 years later it is still regarded as one of the very best.

As I began my fourth year in the United States I found myself smack bang in the middle of Oakmont's preparations to host its eighth US Open. This is my third year at the historic country club situated in Pittsburgh, Pennsylvania; and without a doubt the biggest year of my career to date.



David McCaffrey

In 2002, I embarked on the International Intern Programme offered by Ohio State University. I first interned at The Sea Island Golf Club in Georgia, but it wasn't until I arrived at Oakmont in 2004 that I realised quite what this industry was all about. I had been warned that this was no easy place to work and that was to become apparent very quickly. A golf course does not get the reputation of the best without hard work.

John F. Zimmers Jr. took over as Superintendent in 1999 and is a Superintendent who demands the best at all times. He is the most intense and focused individual I have ever worked for. During his tenure Oakmont has undergone extensive course restoration in an attempt to return the golf course to its original design.

The extent of work done at Oakmont is now setting the benchmark for many others. The tree lined fairways of the 1994 U.S. Open have been completely altered with the removal of nearly 5,000 trees as the course was originally designed to be in keeping with the famous links courses of the UK and Ireland and was entirely treeless until the 1960's. Along with restoring the course, the tree removal programme was vital because the course was becoming overgrown and the turf was being affected. The trees were sucking moisture out of the soil, causing considerable shade and restricting air movement throughout the course.

The improvement in turf quality has been fantastic and similar tree removal programmes are being implemented at many clubs. In conjunction with the tree removal, the course has been lengthened with the addition of six new tee complexes. These alterations mean that Oakmont can boast to having the longest par-5 in U.S. Open history, the 12th hole, at 667yds and also the longest par-3 in U.S. Open history, the 8th hole, at 288yds. Many of the fairways have been narrowed and all the Fescue ditches that play an integral part in Oakmont's design have been deepened and refurbished. The course's 190 bunkers have all been rebuilt, and more have been restored in keeping with original design, increasing the number to nearly 210, with the most notable addition of four extra mounds to the infamous 'Church Pews'.

Oakmont is unique in that its location means taking care of the greens requires a lot of attention. The summer temperatures can easily soar

up to 35°C and this is a period when the conditions would be best suited to growing Bent grass rather than the native Perennial Poa. The greens are a mixture of Perennial Poa and Bentgrass at a ratio of around 90/10. The Poa at OCC is virtually unique to this area of the States with its resilience making it a very hardy and tough species. There are not many greens in the world that could withstand the torture these greens receive every day.

Perennial Poa also differs in respect to what British Greenkeepers are familiar with, in that it produces very little in the way of seed heads in the spring, avoiding the bumpy surfaces they bring with them. The leaf blade is extremely fine and creates a very dense sward. The fairways and tees are a mixture of Bent and Poa at a ratio opposite to that of the greens, the rough consists of a mixture of Poa annua, Kentucky bluegrass and various cultivars of Ryegrass.

Intense aerification plays an integral role in the upkeep of the course. Through years of aerifying at a depth of only 2-3 inches, the greens had



An aerial view of this stunning course



The unique and infamous church pews

developed a very severe perched water table which was restricting root growth and in turn affecting the turf quality. It was decided that Drill and Fill was the best technique to break through this layer and begin to alter the sub soil. This operation involves drilling down to 12 inches, removing the debris and filling the cavity with sand. The greens are then cleared of any debris and the crew will come straight back and Quad tine the greens twice more. This creates many small holes and quickens up the healing process. Zimmers is a believer in doing as much of the work by hand and reducing machinery traffic on the greens. In order to fill all the empty holes, the sand is applied using shovels and brooms.

The final step is Sand Injection which involves a machine to inject sand into the greens profile using a high-pressure jet of water. The sand is incorporated into the water before entering the soil profile. During aerification over 50 tonnes of sand is put into the greens profile and over the past five years the infiltration rate through the soil has risen from half an inch to over six inches per hour.

Throughout the height of the season the greens are vented every 2-3 weeks using pencil tines at two inch spacing, this operation is carried out first thing in the morning and the greens are then rolled before being cut to eliminate any scalping that may occur due to tufting.

The approaches and tees are aerified in a similar way to that of greens, but with larger 5/8th tines. Aerification on the fairways is carried out with two Ransomes GA-60 aerifiers, operated by modified Cushman utility vehicles. All roughs and fairways are slit using an 'Aerway' machine towed behind a Cushman and they are also deep tined. The knives penetrate up to eight inches deep creating an ideal slit which helps with water infiltration and root development. OCC has also undergone a very intense rough renovation programme, in an attempt to eradicate Poa Annua. During the autumn the rough has also been aerified using the GA-60's and then over seeded with a Kentucky Bluegrass/Ryegrass mix, the plugs and seed are then dragged and broken up.

OCC employs nearly 45 staff within the grounds department, including three Assistants, ten Turf Graduates and almost 20 Turf Interns. Immense effort is put into providing these interns with housing, food and offering them the very best opportunity to take as much away from their time at Oakmont.

John Zimmers has been building his current staff for the past two to three years, creating an operation that virtually runs itself. Every day

begins with the interns setting up all the mowers, loading them on trailers and checking fluids. This is followed by a 5-10 minute meeting in which the Superintendent and his Assistants update the crew on any relevant news and issue the morning assignments.

OCC is famous for having, quite possibly, the fastest greens in the world and it comes as no surprise that they require the most attention. All playing surfaces are cut every day during the season, with greens being cut three to four times every morning at 0.086 (2.2mm) using Jacobsen hand units with solid rollers. The hand units are responsible for 2-3 cuts while a triplex is used to make the first cut to remove dew and save on labour. The clean up cut is carried out using a separate mower set at 2.6mm and this is usually done every other day to reduce wear. After the Greens are cut they are rolled using Salsco ride on rollers, a process that is carried out on average, five times per week. Tees and Approaches are cut every day using Toro 1000 hand units set at 8.4mm and 6.5mm respectively. Fairways are cut at 9mm with grooved rollers by 7-9 people with triplexes. They operate in pairs splitting each fairway in half, one person working towards the tee end while the other works toward the green. There is also a person who works by himself with a triplex, set at the same height but with solid rollers on the units. This mower is used to cut the clean up pass around each fairway and reduces stress to the grass plant.



Drainage work

The stress that the turf is under during the summer from mowing and high volumes of play, can be immense, this, coupled with the high humidity levels in Pittsburgh, make spraying and watering the most important factors. Although Oakmont is equipped with the very latest irrigation system the greens/approach heads are never used, all watering to these areas is carried out by hand. 3-4 employees are entrusted with the responsibility of preparing the greens every morning after the mowing is complete. No two days are ever the same and the waterer must learn to observe the changes in the greens appearance and demands. The aim is to give the green just enough water to be able to survive, with the option of 'touching up' localised wilt during the afternoon.

The greens have to be as fast as possible at all times which means that they have to kept 'on the edge' at all times. During the summer the greens will start to wilt just after lunch and they will then be touched up if required for the remainder of the afternoon. The humidity plays a massive role in the amount of water applied, if the temperature is 35°C and humidity is 95% this will require a lot less water than if the temperature was cool and there was very little humidity. The waterer could have to cool off the green five or six times during the afternoon in an attempt to keep the grass plant cool. Once the temperatures begin to drop and the water crew deems it time, the course is 'put to bed', a process that involves watering hot spots and problem areas, building moisture in these areas and giving the turf enough water to recover over night. All surfaces (excluding greens) are watered at night if necessary and then any daily watering is done by hand, utilising a crew of up to 12 people.

Most spraying, and OCC use Floratine products and Primo Maxx, is carried out on a Monday morning as the course is closed until lunchtime in order to prepare for the corporate shotgun later that day. Oakmont is fortunate enough that it has enough equipment to be able to spray any day of the week and it is not uncommon to spray up to three times a week depending on the pressure the turf is under.



A tree felling programme has returned the course to its original feel



The Oakmont soil profile



As this spring approaches, the crew will be under pressure to prepare the course for the upcoming US Open, a task that is made slightly easier by the high standards kept at OCC every other day of the year. It has often been said that if the Open had to be moved to a different venue any year, then Oakmont would be ready.

The general course maintenance will not change with the exception of growing up the rough, the USGA have again adopted a 'graduated rough' as they did at Winged Foot GC last year. The first cut will be 6ft wide and cut at 1 ¾ inches, the second cut will be 12ft wide and cut at 4 inches and will incorporate most of the bunker and green complexes, finally the third cut for the deep rough will be at 6 inches.

OCC has been preparing for this event for the last seven years and it is only as we come closer to the final stages of the preparation that it truly becomes apparent what we are about to be a part of. The regular staff will be helped out by an extra 120 volunteers during the week of the tournament and they will be assisting all aspects of course maintenance. 20 people will mow greens while raking the bunkers will swallow up another 30 people, this puts a serious dent into the staff quota and it is easy to see where the extra help is essential.

Along with the golf course itself the USGA also builds a small town around all 18 holes, from the merchandise tents and media facilities to

the volunteer tents and grandstands. Over 12,000 cubic yards of gravel for these to be built on. When all is said and done and the final putt is sunk on Sunday afternoon, I hope to look back on this experience with great satisfaction knowing that I have been a part of something truly special...

I would like give extreme thanks to Mr. John F. Zimmers Jr. for all he has done for my career, I hope to keep learning from him for many more years to come. I would also like to thank Mike O'Keeffe, at The Ohio State University. Being part of the programme was truly the best thing that I ever did and gave me a lot of opportunities. Thanks also to LC Lambrecht/Golfstock for the great photos, Gareth Woosnam and his team at Oswestry Golf Club and Reaseheath College.

About the Programme

It is run by Michael O'Keeffe and they bring trainees from all over the world to top courses, such as Oakmont, Merion, Pine Valley, The Olympic Club, Pebble Beach. You have to be single, drug free, have a clean drivers license and be between the age of 19 and 29 years old. If you have any questions about the programme feel free to email me at: mccaffreydavid@hotmail.com or Michael O'Keeffe at: okeeffe.1@osu.edu

The website for Oakmont is: www.oakmont-countryclub.org

