

THE BUNKER

Discovering the science of bunker construction and maintenance

Issue 3

From Venice to Rome: AquaEdge on the 2022 Ryder Cup Course



The First Aquaedge project in Italy, Hole 10 on Golf De Lignano, near Venice

Rarely are features on a golf course built to be, as Dr Alister MacKenzie would describe, 'of a permanent character'. Even very sturdy looking timber lake edgings have a shelf life. Lignano Golf Club, near Venice, built in the 1990s, is now faced with the challenge of replacing long lengths of timber retaining walls, which are past their best, and represent a genuine hazard. Rather than replace 'like for like', Director of Golf, Fabrizio Bertoli has found an innovative alternative which is cost effective and will improve the aesthetics of this popular golf course.

Bertoli noticed that article on Aquaedge in GCA magazine, and called in the inventor of the system, Richard Allen to advise on the feasibility of installing at the Italian course. 'The timber edgings, over 25 years old, were rotting, and the weak clay/silt soils (which were dredged from a nearby Marina to raise ground levels during construction) exerted considerable pressure, causing the walls to start failing.

They represent a significant safety and aesthetic problem' explained Allen.

In response, a team from EcoBunker Ltd installed a 50m long trial length of Aquaedge along the front of the 10th green. The results were received very warmly by the golf club, and within a few weeks the EcoBunker team returned, constructing over 350 metres of lake edging on holes 12, 13 and 14. 'We now know we made absolutely the right decision in choosing Aquaedge' stated Bertoli.

The news about the innovation at Lignano spread rapidly through Italy, and the company, European Golf Course Design spotted an opportunity to solve a problem on the Marco Simone Course near Rome. Designers Jeremy Slessor and Dave Sampson explained that the lake edges on the course (already selected for the 2022 Ryder Cup) were particularly susceptible to erosion and damage from the local water rats. Significant damage

could be caused within hours, so it was very important to deliver a solution that could guarantee beautiful aesthetics right the way through Golf's biggest tournament. Furthermore, the razor sharp aesthetics offered by Aquaedge suited the course which is undergoing a major renovation. The EcoBunker team, in collaboration with SOL golf will be installing the lake edges in early 2019 following other highly successful projects at Queenwood, Brean Country Club and Pinnau GC near Hamburg.



Aquaedge – Engineering Excellence

Why choose EcoBunker?

If you have made no bunker renovations to your course over the last 10-15 years, you may be unaware of the benefits of a significant influx of new technology. In our field of expertise, the emergence of bunker systems has been rapid and there is now a bewildering array of choice available. 15 years ago, the only options were the now widely despised Terram style geomembrane, and Sandtrapper which was the first mass produced custom built

bunker liner. Now, the choices include a range of rubber crumb derived options, resin stabilised aggregate systems, such as Capillary Concrete, recycled artificial grass, new fabrics, soil stabilizers and more. Golf clubs are beginning to realise that by investing in such systems they can make major savings in maintenance, and as a result, bunker redesign/renovation/restoration schemes are tending to be the most popular course improvement works.

How can you be sure that you are selecting the right solution for your club and why choose to work with EcoBunker Ltd.

In order to answer this question, we will refer to some recent high profile projects, where, for differing reasons, golf clubs have chosen to switch to EcoBunker away from other bunker systems:



EcoBunker Advanced is built on sound engineering principles at Tiburon

Tiburon Golf Club, Naples, Florida

The impact of greens cutting machinery and the arrival of Hurricane Irma in September 2017 caused Tiburon GC, Home of the PGA Tour, Greg Norman sponsored QBE Shootout, to think again about their bunker construction.

Their existing synthetic bunker edge solution (built in 2015 and 2016) proved incapable of withstanding the effects of imposed loading and the impact of a

Category 5 Hurricane. When Tiburon GC heard that EcoBunker systems, installed at Secession, The Medalist, The Floridian and several other venues impacted by Irma had survived with zero damage, the club made further enquiries.

The club recognised the superior strength and efficiency inherent in the EcoBunker Advanced system, plus the professional engineer-led back office, and is now replacing all their original synthetic stacked sod bunkers, starting with the most severely damaged.



Hurricane Damaged Bunker walls are being systematically removed.

Budersand GC, Sylt Island, Germany

The recycled synthetic grass tiles used to build bunker walls are not the same!

It may come as a surprise to some, but producing a quality end product from recycled material is much more difficult than starting from scratch with the pure raw ingredients. Artificial pitches can be unevenly worn, have different sand infill and grass colouring and variable densities in sward. Add in the fact that processing this very bulky material is difficult and labour intensive and the result is a great challenge to produce uniformity, which is so important for aesthetics and structural stability. EcoBunker Ltd has vetted and selected 3 manufacturers who have proven their ability to deliver consistent and top quality turf.

Furthermore, we have rejected those who have failed to meet our requirements. The effort we made to select the best has reaped dividends on several occasions. Most notably, in 2017 Budersand Links, ranked number 2 golf club in Germany switched to EcoBunker after comparing the quality of turf provided in samples and installed at other clubs in Germany.



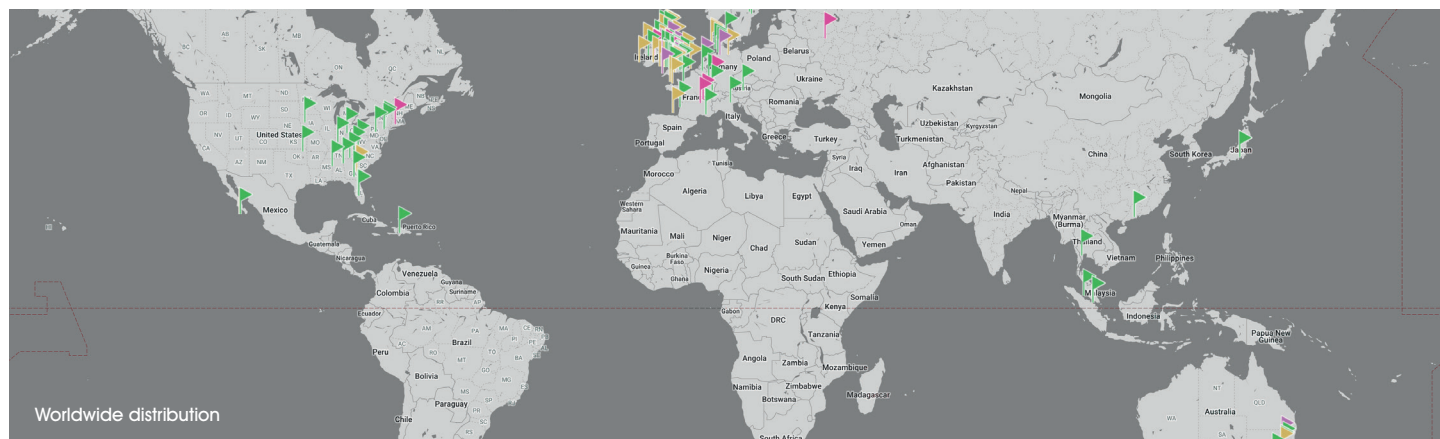
Stability and Aesthetics rely on top quality synthetic tiles

Nine Bridges, Jeju Island, South Korea

EcoBunker Ltd now has clients spread over 4 continents and 26 countries. It is vital to maintain a quality service and

we have constructed a full time in-house operations team to oversee all aspects of production and logistics. We are the only company active in this sector with such a team, but in truth, there is no other way to do this consistently. Subsequently, our ability to respond quickly to any change of circumstance in the fast-moving world of international freight was recognised by the

client at Nine Bridges, Jeju Island, South Korea. After checking our communication skills, supply chain, track record, knowledge of international shipping issues such as duties, fees and INCO shipping terms, Nine Bridges decided to switch to EcoBunker Ltd for the completion of all revetted bunkers on their course, which has hosted two PGA Tour events.



Worldwide distribution

EcoBunker at Ellerston



The First of many ecobunkers at Ellerston GC

Ellerston GC, New South Wales has a good claim to be the world's most exclusive golf course. Designed by Greg Norman GCD for media magnate Kerry Packer, this beautiful, but remote golf course has very few rounds played on it, but one recent visitor lucky enough to experience the course will be well known to many in the world of bunker construction. Our Llewellyn Matthews,

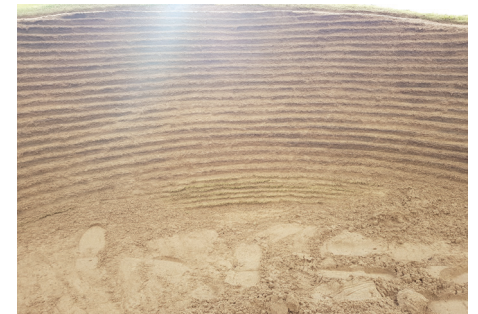
pictured here with our Australian Distributor Shane Summerhayes (Turfcare Australia) hit lucky during an EcoBunker construction project at the course, getting a rare invitation to play the splendid layout. It was a great reward for the hard work Llewellyn has put in at courses like Ellerston, and the club there are now embarking on a full renovation of all their bunkers using our system.



Llewellyn Matthews and Shane Summerhayes at Ellerston GC

Tradition Hybrid bunkers at The Island Golf Club, Dublin.

Late summer 2018: Huw Morgan technical manager at Ecobunker met up with Superintendent, Dave Edmondson to discuss the problem of natural revetting turf rotting in the bases of bunker causing subsidence and wastage when rebuilding.



Permanent Revetted Foundation

Dave and Huw discussed the successful outcome of previous trials and the cost benefits before setting up a bunker camp. Huw travelled to Dublin for 3 days, working alongside the experienced team building 2 bunkers, also using the opportunity to demonstrate the solution to visitors from other nearby golf clubs.

Dave Edmondson said *"having discussed with Huw Morgan and given it long thought it was a no brainer for me and the club. I am convinced this new technique will lengthen the life of my bunkers and reduce wastage of expensive natural turf when we have to rebuild in a few years' time"*.

Dave and his team were so impressed they ordered more material to complete some more bunkers this winter and the club is set to use this as the default method for future construction.



Considerable Labour Saving