



The Solution to Bunker Face Erosion

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Introduction

Durabunker: The Product

Durabunker is a cost effective and environmentally friendly solution to the problems associated with bunker face and edge erosion. The construction method used to build Durabunker has been granted international patents and has been adopted in the UK, Europe and USA by a variety of golf courses, including typical private members clubs, municipal facilities, proprietary owned courses and even Open Championship venues such as Turnberry and St Andrews.

Leading golf course architects such as Nicklaus Design, Pierre Fulke Design, David Krause and Ron Kirby (The Old Head) have all recognized the benefits that the Durabunker method represents and have approved the building of bunkers using this methodology.

Durabunker is a versatile product with a variety of design styles, suitable for Parkland, Heathland, Moorland and Links style courses. With a minimum design life of 20+ years, Durabunker guarantees significant cost and maintenance savings. Cetco a worldwide leader in the research and development of construction materials estimates that the material used to build Durabunker will have a lifetime of up to 200 years.

Key Benefits

- Design life of 20+ Years
- Dramatic reduction in bunker maintenance
- Significant cost savings
- Consistent appearance of bunkers
- Resistance to all forms of erosion
- Can be used for new builds or renovations
- Environmentally friendly, built from 100% re-cycled materials
- Drought tolerant and resistant to deep thaw cycles
- Requires no water for duration of lifetime
- Resistant to burrowing animals
- Guarantees fixed edge positions
- Prevents sand contamination
- Drastically reduces edging work
- Reduces wash out
- Superb natural appearance and playing characteristics
- Diverts labour to other golf course related tasks
- Range of design styles

Cost Savings

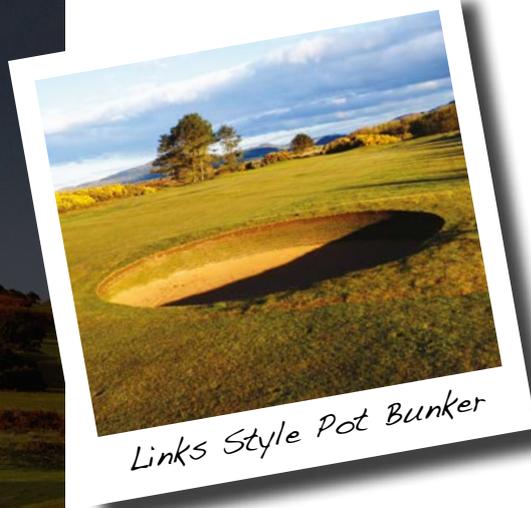
Cost Analysis carried out with many of our clients indicate significant financial savings over the design life of our product. Many clubs realize a return on investment typically between year 3 and 5 depending on several factors and also recognize the many other added benefits our product represents. These cost savings have already been realized by some of the earliest adopters of the Durabunker construction method such as Seaton Carew GC who began their bunker renovation project in 2012. Each club is unique but it is estimated that at this venue cost savings alone will be over £200,000 during the lifetime of the product, proving that Durabunker delivers benefits to the bottom line as well as on the golf course.

“Using Durabunker as a method of constructing bunkers offers impressive medium and long term financial savings”

**Jim Cockburn,
Hon Treasurer,
Seaton Carew GC**

Design Styles

Links Style Pot Bunker



The iconic links style pot bunker is ideally suited to the Durabunker design. This is a classic links bunker in keeping with the traditional look of a championship links course. The steep angle of gradient of such bunkers prove problematic and often need reconstructing on a 2 to 5 year cycle.

Durabunker overcomes these problems and provides a consistent appearance that does not deteriorate over time. Durabunker is flexible and shallower gradients can be adopted as required.

Free Form Bunker



Some golf clubs prefer intermittent and variable height bunker edges. Durabunker can be used to great effect in our free form design. Several architects are implementing this design.

Shallow / Re-Enforced Edge Design



This design is more suited to parkland type golf courses that require a stable edge solution. This bunker shows how the design can be adapted to suit bunkers that require a shallow edge or lip. The synthetic 'DURALiner' bunker liner can be seen here, offering a fully sealed synthetic bunker solution.

"It's unbelievable, I never would have imagined that synthetic bunkers could look so good, this product will really help us elevate the golf course to the place we want it to be"

Ryon Ott, Troon Golf

Hybrid Design

The hybrid design is a fusion between a sand splash and semi-revetted face. This type of design is favoured by some heathland and moorland courses, which although not traditional links, are still suited to the revetted type of style. The lower portion of the bunker face is built at a shallow gradient, designed to hold sand below the angle of repose, with the upper face being built at a steeper gradient to ensure a visible revetment.



Hybrid Design

Rolling Edge

The rolling edge provides fixed positions with varying vertical height giving a natural fluidity to the aesthetics of bunker edges. Many inland courses are drawn to this style of bunker which also prevents sand contamination from crumbling edges. This design can also be effective with either our own DURAliner bunker liner (effective on gradients up to 35 degrees) or indeed any other type of bunker liner.



Sand Splash Face

Custom Designs

Durabunker is a flexible product that can be adapted to any style of bunker required. Complex edge designs that often look aesthetically pleasing but result in heavy maintenance burdens can be constructed with the knowledge that Durabunker will overcome this problem and offer durable, long lasting bunker edges that require no maintenance. Advice and guidance on bunker design can be offered by Durabunker or we can refer you to experienced golf course architects who have worked closely with us to carry out bunker renovation or construction work.



Custom Design

“Building bunkers using the Durabunker method has produced fantastic results for us on both the new 9 hole course and championship course. This is a highly cost effective way to build beautiful bunkers that require virtually no maintenance. We look forward to working with Durabunker to complete the renovation project over the next few years”

**Christer Ral, Owner,
Frosaker GC, Sweden**

Renovation Projects

Durabunker is suitable for new builds or bunker renovation projects. Many Architects including former Ryder Cup player Pierre Fulke (Now a partner of Durabunker in Scandinavia), Nicklaus Design (Trump National, Jupiter, Florida), Ron Kirby (The Old Head), David Krause (Past President of EIGCA) have approved the Durabunker construction method on both new builds and renovation projects in various countries.

Tennessee National GC, USA

Architect: Greg Norman Design
Bunkers: 32
Timeframe: 8 Weeks

Tennessee National GC, a signature Greg Norman Design, managed by Troon Golf, commissioned a major bunker renovation using Durabunker in November 2014. Durabunker staff led the reconstruction working in partnership with SouthEastern Golf, the contractor of choice for Greg Norman Design. 32 large revetted bunkers were re-built over an 8 week period, using our re-cycled synthetic material to replace natural sod and utilizing our patented construction method. Bunkers that were lasting no more than a year before requiring re-construction, have now been transformed and are set to last decades rather than months.

Return on Investment:

The golf club was keen to work within a prescribed budget and we were able to facilitate their requirements by working on a bespoke approach to the project, offering significant cost savings over other companies and products.

Troon Golf, who manage the venue, carried out cost analysis on the project at Tennessee National and expect to see a return on investment by the end of year 3. Although every course is unique, this is not untypical of the time frames over which many of our clients begin to realize financial benefits, with each year after providing significant cost savings on an annual basis. A critical facet of any project, we are able to work with clients to produce cost analysis based on their unique set of circumstances, demonstrating clear and significant cost savings over the lifetime of the product.

Baden Hills, Germany

Durabunker Ltd were commissioned to renovate 18 bunkers in Autumn 2014 at this parkland venue in Germany, with further bunkers set to be rebuilt following the initial project. Baden Hills chose to use our product having suffered with burn off of natural grass faces during the hotter Summer months as well as animal damage. Our team were chosen to execute the project as contractors, in recognition of the bunker construction experience we possess with shallow edge bunkers as well as deeper faces at the golf club being ideally suited to the versatility of our product.



Tennessee National GC, USA

“The product has absolutely transformed our bunkers. They look incredible, so natural and totally in keeping with the golf course. Everyone to a man has been blown away by the results achieved through using Durabunker, I would highly recommend building sod wall bunker faces or shallow edges using this method”

Andrew McClintock
Course Superintendent,
Tennessee National GC,
USA

St Enodoc, UK (Golf Digest World Top 100 Courses)

Recently voted #99 in Golf Digests World Top 100 courses, St Enodoc is a classic Links Course set on the Cornish coastline in England. The club decided to trial Durabunker through an initial renovation project, with our staff rebuilding several bunkers on the practice facilities in conjunction with local greenstaff. Such was the success of the initial project and the overwhelmingly positive reaction to our product, that the golf club immediately decided to introduce our synthetic bunkers onto their highly respected Championship Course, with further bunkers set to be re-built during a second phase. The experience at St Enodoc GC typifies the impact that our innovative product is having on even the more traditional and established golf courses in the UK.



Seaton Carew GC, UK

Host of the 2014 Brabazon Trophy, Seaton Carew are following a model that many of our clients use to renovate their bunkers. The Durabunker construction method was first introduced to the course in 2012 with further bunkers being re-built each year since. Seaton Carew GC are executing their renovation project using experienced in house staff under a licence agreement with Duarbunker Ltd, yielding cost savings, whilst not compromising on quality.



“The bunker construction skills demonstrated by the Durabunker team were exceptional. They were a pleasure to work with and I would recommend them to any club”

**Scott Gibson,
Course Manager,
St Enodoc GC**

Durabunker Ltd has established, and continues to develop, partnerships with a variety of companies on an international basis. We actively seek out companies and individuals who share our passion for the game of golf and our insistence on high quality outcomes at all times.

Our partners include:

Pierre Fulke:

Course Architect, Ryder Cup Player and Multiple European Tour Winner.

Pierre Fulke Design has worked with us on a number of projects in Scandinavia and acts as a representative of our company and product in Sweden.

Project Focus: Frosaker Golf and Country Club

Host venue for Annika Sorenstams farewell professional tournament, Frosaker G&CC, Sweden began a 60 bunker renovation project with us in May 2015, using our patented synthetic bunker solution. Pierre Fulke collaborated with us on the design phase of the project, before handing over responsibility for construction and shaping work to our team.

SouthEastern Golf, USA

SouthEastern Golf are recognized as one of the premier golf course contractors in the USA. We first worked with them on a wall to wall renovation project at Greg Norman designed, Tennessee National GC. They have become one of our approved installers and are on hand to execute installation work in most parts of the USA.

Mafer Golf, Spain and Portugal

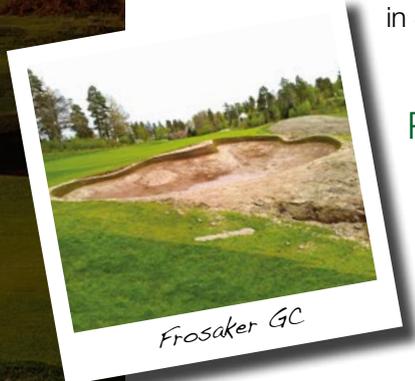
Approved Installers of Better Billy Bunker Liner, Mafer Golf have now partnered with us to also install Durabunker in Southern Europe. With a track record that speaks for itself, Javier Fernandes and his team are on hand to support courses that wish to use a contractor for installations in Spain and Portugal.

Evergreen Golf, Germany

Evergreen Golf is a well known and respected company in the German, Austrian and Swiss Golfing Industry. They have partnered with us to promote Durabunker, our product and services across these countries with the first joint project in Golf Club Oberstaufen, Germany.



Ryder Cup Player with Durabunker MD Rhydian Lewis



Frosaker GC



MD, Rhydian Lewis with team from SouthEastern Golf



Evergreen Golf's Frank and Suzanne Esslinger with MD, Rhydian Lewis at GIS San Antonio 2015

“The input on site from Durabunker was very valuable and the team led by Rhydian was able to interpret my ideas and produce the results we were all hoping for. The product itself enables designers to create ambitious bunker shapes that will remain as they were intended to look, without the concern of erosion or degradation”

Pierre Fulke, Golf Course Architect and Former Ryder Cup Player

Construction Options

Durabunker Ltd recognises that golf clubs are operated and managed in various ways. In response we offer a range of procurement methods for Durabunker:

Full Contractor

Our team is comprised of professionals in the construction and landscape industry, qualified and vastly experienced greenkeepers, contracts managers and experience project manager. With over 75 years of combined experience in this field, we are able to offer an assurance to clients that they are in safe hands. We are able to undertake complete bunker renovation projects or new builds, including shaping, drainage, liner installation, reinstatement, and of course, installation of Durabunker. A range of contractual terms and conditions are available on request.



Full Construction

Management Contract

Where golf clubs have available resources, there is often a desire to undertake as much of the work 'in house' as possible. In these circumstances, Durabunker Ltd can provide experienced staff to support any size project. We believe in a flexible approach and aim to engage our clients in dialogue to ensure the optimum working model to fit their unique requirements.



Managed Contract

Supply Only Contract

Many golf clubs prefer to undertake all of their course construction projects using their own staff and resources. Durabunker Ltd offers a pathway for local golf club staff to become 'Accredited Installers' of Durabunker. Under this contractual option a licence will be granted to enable golf clubs to construct Durabunker using their accredited staff (Subject to terms and conditions).

"The Durabunker staff led my team exceptionally well. These guys know how to build high quality bunkers and we look forward to working with them in the future"

Lance Struder, Senior Construction Manager, SouthEastern Golf, USA

Portfolio

Our international portfolio includes the following courses:

- St Enodoc GC, England
- Tennessee National, USA
- Golf Club Budersand, Germany
- Frosaker Golf and Country Club, Sweden
- Baden Hills, Germany
- Southernness GC, Scotland
- Bradfield College GC, England
- Llanhydrock GC, England
- City of Wakefield GC, England
- Seaton Carew GC, England

"I am extremely impressed with the product and the company. Although Durabunker uses synthetic material to build revetted bunkers, it looks entirely in keeping with our golf course, very authentic and visually appealing. The difference is that these new bunker faces will stay that way for many, many years, and are maintenance free. It really is a revelation for us here at Budersand"

**Jim Ellis, Course Manager,
Golf Club Budersand**



*Tennessee National, USA
Before...*



*Tennessee National, USA
After...*

The Company

Durabunker Ltd are a specialist contractor, operating in the golf and leisure sector, focusing mainly on the construction of high quality, durable golf course bunkers. Our team consists of vastly experienced bunker builders, highly qualified greenkeepers, specialist construction professionals, experienced project managers, licensed excavator operators, international sales representatives, material specialists, chartered accountants and even former Ryder Cup players. A first class team to assist you in every aspect of your project life cycle.

Durabunker Ltd are committed to providing sustainable and environmentally friendly solutions to the golf course construction industry.

Intellectual Property Rights

The Durabunker construction method is protected by granted international patents and design registration. WRAP Cymru, a publicly funded government organization, provided grant assistance to fund all IP applications in relation to the Durabunker method.

IP rights include:

Granted UK Patent: GB2490637B

Granted US Patent: USD682966S

Granted European Patent: EP2490717

Registration of Design (No. 001929456-0001) has also been granted throughout the EU.

For further information on the IP associated with Durabunker please visit our website: www.durabunker.com/patent



“The labour and maintenance savings made through Durabunker allows for considerable man hours to be diverted to more essential works on the course. The overall effect is to present the course, particularly the bunkers, in pristine condition. In my 40 years at this course, using the Durabunker method to build bunkers, is the most spectacular change made”

**Tony Cartwright,
Head Greenkeeper,
Seaton Carew GC**



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