FOREWORD

Sand has been the foundation of my success. Before I began designing golf courses, I spent a great deal of time studying and playing the sandy courses of the British Isles. I found that courses built on sandy terrain supported a unique style of golf, played along the ground as well as through the air. Firm conditions meant that the golfer had to account for the bounce and roll of the ball, creating strategic options and problems seldom seen on most golf courses. The courses fit the lay of the land, complete with imperfections and irregularities of all kinds. They were easy to maintain, affordable to play, and enjoyable to all levels of golfers. These values formed the foundation of my approach to golf course architecture, and I was fortunate to work with sandy terrain from the start of my career.

From my very first entrée into golf course design, working for Pete Dye at Long Cove Club in South Carolina, seeing golf holes shaped in open sand was a revelation. I remember the "eureka!" moment when I suddenly understood that where Pete decided he wanted bunkers, we would just not plant grass!

For a golf course architect, the practical advantages of working in sandy soils are many. You never have to worry about falling behind schedule in construction, because rain percolates quickly through the soil and does not stop you from shaping or finishing the holes. The soil is easier to move and easier to clean up, so you can work with smaller equipment and create more intricate contours. You can use native soil for the greens mix and bunker sand, and you can leave little folds in the ground to add interest in the fairways and greens without worrying about them turning into bird baths.

Best of all, as you are shaping the greens, fairway contours, and bunkers, your first draft is the final effort. You do not have to allow for topsoil to be plated over the contours, or allow for a drainage layer under bunkers and greens. What you see is what you get; you can stand in a bunker and see exactly the recovery shot that will have to be played, and dig the bunker slightly deeper or fill it in a bit to get the shot values you want.

Of the thirty courses I have built to date, sixteen are built on sandy sites, including many of my best courses. The ease of construction in sand is what enabled me to build my first solo design, High Pointe in Michigan, with only a little bit of outside help, and the necessity of shaping the course myself with a small bulldozer was the catalyst that led me to produce a minimalist design.

At Pacific Dunes in Bandon, Oregon, I had the opportunity to work with a truly world-class sandy site. There I was able to put into practice all I had learned studying sandy courses around the world. We took full advantage of the windy site with a looping routing that ensured the golfer would encounter the wind from all angles. The ground game plays a major role in the strategy at Pacific Dunes. Understanding the contours of the fairways and approaches is critical to success, and we really took our time with each little wrinkle. I was able to carve the bunkers directly into the dunes, creating dramatic natural hazards that fit perfectly into the rugged coastal landscape. The end result is a course that fits perfectly into the landscape and makes the most of all that sandy ground has to offer.

The success of Pacific Dunes solidified my reputation as an architect that knows how to get the most from a good site, especially a sandy one. Following Pacific Dunes, I have had numerous opportunities to work with sandy terrain around the world. Each sandy site is different with its own opportunities and challenges. At St. Andrews Beach, the course was literally just sitting there, we were able to mow down the pasture grass and play the holes before we even began construction. At Ballyneal, the dunes were so big and undulating that it was a real challenge to design holes that fit the landscape but were not too severe. At The Renaissance Club, the sandy contours ranged from huge, forested sandhills, to coastal dunes, to tiny wrinkles on basically flat ground. Trying to create a cohesive golf experience on such varied ground was a real puzzle, but being open to what the ground offers is what golf on sandy terrain is all about. During my studies in the British Isles, I learned to keep an open mind and as a result, my courses on sandy sites are as varied as the terrain itself.

George Waters understands golf on sandy terrain in a way that few others do. From his first foray with us at Barnbougle Dunes, to sandy sites in Scotland, Ireland, and Long Island he has had the opportunity to get his feet wet in design and construction on some great sandy sites. I am glad he has taken the opportunity to praise the merits of golf on sandy terrain, and to explore what makes it so special. In *Sand and Golf,* he shares his insight into all aspects of golf on sandy ground, insight gleaned from years of traveling, studying, and working first hand with the great sandy courses of the world. This is a great book for golf course architects, managers, and developers to read. It thoroughly describes what makes for great golf on sandy ground and the interrelationship between design, construction, and maintenance needed to get there. In the end, however, this is a book for golfers. It offers a view through an architect's eyes, giving them insight into the unique landscapes, designs, and styles of play found in the world of sandy golf. George's fine photography captures all elements of golf on sandy terrain, from the spectacular to the subtle. These photos beautifully illustrate the concepts described in the book and capture the imagination of any golfer. Reading this book will surely encourage you to seek out the sandy courses described and enjoy and appreciate them in a much deeper way. The reader is also left with a better understanding of golf as a whole, its origins, its relationship to the landscape, and what makes a golf course enjoyable to play. *Sand and Golf* is a true gem.

I have been fortunate to employ many of the best and brightest young minds in golf course design on our projects over the years, and George Waters is one of the best of them. *Sand and Golf* demonstrates a solid understanding of the relationship between great terrain and great golf. I am proud to have contributed to that understanding, and I have greatly enjoyed working and golfing with George on sandy courses around the world. He has a very bright future as a golf course architect and this book represents a significant and unique contribution to the literature of golf course design. I know you will enjoy it as much as I have.

Tom Doak / November 2012