

Golf Digest

ASK AN ARCHITECT

Why some courses invest nearly \$1 million in this sneaky genius bunker feature

By Derek Duncan May 23, 2024



Courtesy of Polyplast Systems

In our latest installment of “Ask an Architect,” in which we bring a topic in the world of course design to an architect, Drew Rogers fields our question on the value of bunker liners.

Rogers worked with the late Arthur Hills for 18 years, and since 2010 has consulted with dozens of clubs around the United States on their renovations, including Old Elm Club (No. 164 on America’s Second 100 Greatest Courses) and Knollwood in Chicago, Pine Hills and Kenosha Country Club in Wisconsin and The Country Club of Naples, Lemon Bay and Quail West in Florida, among others.

Question: Drew, bunker liners—barriers made of polymers, concrete or other materials that protectively seal bunker sand from the underlying soils—have become widely used during the past decade but can add major cost to construction budgets, perhaps \$250,000 to \$1 million depending on the product and course’s overall square footage of bunkers. What do you tell clubs about the value of bunker liners?

Rogers: The short answer is that bunker liners are just another tool in our arsenal. At best, they can potentially solve a variety of maintenance and architectural issues. The first liners were developed several decades ago to help manage bunker drainage and to prevent contamination when underlying soils leech into the sand, which is going to happen at some point. When this happens, you eventually need to replace the bunker sand.

I try to explain to clubs what liners do and how they can be helpful. First, many clubs spend an enormous amount of money on specialty bunker sand that needs to be transported in, often from long distances. Liners can protect this investment by keeping the underlying soils from infiltrating the sand. Second, they help with erosion and irrigation. The premium liners we use now allow water to pass through the sand without destabilizing it, and this can save countless hours of labor that would otherwise be spent pushing and raking the sand back up into faces after heavy rains. Third, because of their unique properties they allow architects to do more with our bunker shapes. We can design bunkers with the sand flashed high on the face for added visibility and aesthetics. We can get a little more creative without worrying about washouts or collapsing faces, which in the past would have been a concern on certain sites.

I really fought bunker liners for a long time. The old versions weren’t as effective and had shorter lifespans, and I didn’t feel like I could trust them. But they’ve come a long way in the past 10 or 15 years, and now they’re just damn effective.

For clubs that are willing to invest in these expensive products, will they see a return on their investment?

In most cases I believe so, but it also depends on the existing conditions and other factors like the number of bunkers a course has, the type of soils, the style of the bunkers and the amount of precipitation the course typically receives.

They’re not right for every site. If a course has sandy or free draining soils, liners are probably not worth it. A dry climate without a lot of rain isn’t going to be committing major hours of labor repairing bunkers after weather events, and courses with flat bottomed bunkers with grass faces probably won’t benefit from them either, though they will help with contamination.

In other places, the benefit of keeping sand stabilized on the bunker face after downpours can save a course a tremendous amount of money. Bunkers have become probably the most expensive and most labor-intensive part of golf-course maintenance. Superintendents do the cost-benefit analysis: Some estimate they can save up to 70 percent of their budget by eliminating the need to devote significant labor to bunker repair. I’ve got to think after four or five years the bunker liner investment is paid off in those situations.

One downside, other than the initial investment, is the cost to tear them out and replace the liners when that time comes, which will happen at some point. [Note: Most liner warranties are for 10 years.] What is the cost and scope of the deconstruction process? We haven’t gotten far enough in their lifecycles yet to know what that looks like, but overall I’ve come around to believing liners are a welcome tool that gives architects and clubs options they didn’t previously have.