

Issue 4 | Fall 2010

BY DESIGN



Excellence in Golf Design from the American Society of Golf Course Architects

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This fourth issue represents the end of *By Design*'s first year. One of our purposes in launching the magazine was to draw attention to the wide range of great work that golf architects are doing around the world. We know that golf businesses everywhere are having to work extra hard to cope with current market conditions, but is the glass half full, half empty, or is it actually twice as big as it needs to be? I refer to the article in this issue on why, in this market, less can often be more.

With that in mind, this issue has a number of great examples of how the golf industry in general, and ASGCA member architects in particular, are retooling to adjust to new market conditions. Our cover story shows that architects can add to their core areas of expertise, and are real trusted partners for golf developers and clubs as they look to enhance their facilities and make them more sustainable. And our piece on stormwater management shows the value that golf facilities have beyond their status as places to play our great game.

We're grateful to get the insight of Joe Steranka of The PGA of America on the value of golf to the economy and Bill Yates on pace of play. ASGCA President Erik Larsen also shares his thoughts on the value of a golf course.

As we enter our second year of publication, we'd like to thank you for your support and the widespread enthusiastic reception for *By Design*. We look forward to bringing you insight into and perspectives on golf design for many more years to come and as always we welcome your comments and feedback.



Yours sincerely,

Bob Cupp, ASGCA
Treasurer
American Society of Golf Course Architects

BY DESIGN

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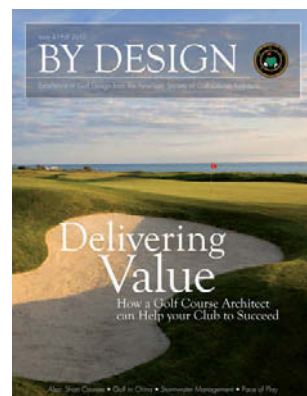
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COVER



Golf at Rocco Forte's Verdura resort in Sicily, Italy, designed by Kyle Phillips, ASGCA

The Sportcrete Bunker System



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Untreated bunker at The Wisley,
8 July 2009



Bunker treated with Sportcrete
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Golf Course Length

Less is more; the rise of shorter courses

Golf developers may believe they need 7,200 yard courses to attract good players, but back tees are rarely used and just add to the cost of construction and maintenance.

Such was the conclusion of a recent panel discussion involving members of the American Society of Golf Course Architects (ASGCA), and led by ASGCA president Erik Larsen. "A golf course owner told me in ten years there were no more than 50 rounds of golf played from the longest tees," said Jeff Brauer, ASGCA, at the panel discussion, which was held as part of the recent Golf Course Builders Association of America annual meeting.

"Extreme length and larger course sizes can be a financial burden on everyone," said Tom Clark, ASGCA. "Courses measuring 7,500 yards or more for 18 holes are played to that length by about one per cent of golfers. Something closer to 6,800 yards from the tips and 4,800-6,200 yards from other tees is good for 95 per cent of all golfers."

Taking into account



the financial concerns of players and course managers, and increasing demands on players' time, a greater emphasis is being placed on the design and construction of nine-hole courses, a throwback to the popular plans of the 1950s and 1960s. "It is obviously less expensive to build and maintain nine-hole courses," Clark said. "And this also provides the benefit of perhaps adding on another nine holes in the future as needed."

During the panel discussion, Larsen noted that architects are increasingly involved in land planning, including walking paths and trails near courses; a view echoed

by Vicki Martz, ASGCA. "A 10-15 per cent reduction in the acreage to be maintained at a course can often be found rather easily," Martz said. "And it doesn't have to be an area where 'you just let the weeds grow'. Land planning and working with natural landscape can make for a beautiful course and surrounding area with less maintenance."

Anyone looking to develop or renovate a golf course will benefit from reviewing the series of Question and Answer brochures created by ASGCA, including pieces on Master Planning, Golf Course Development and Golf Course Remodeling, all available at www.asgca.org.



Old Course in shape with Toro

The St Andrews Links greenkeeping team paid tribute to the Toro turf maintenance fleet that helped it keep the Old Course in championship condition for the 150th annual Open Championship. "Our Toro fleet certainly helped us to get the job done and achieve the results we were looking for," said Gordon Moir, director of greenkeeping. "We've been using Toro machinery for a considerable number of years and have found it to be reliable, plus it produces a high quality of cut. The Old Course is very demanding on machinery and staff alike, and we feel that Toro helps us produce a high standard of finish."

New rotor eases water management

A new rotor from Rain Bird allows for adjustment between full- and part-circle arcs at the twist of a screw, allowing superintendents to quickly and easily adjust watering on the course as required. The new rotors also offer backward compatibility, meaning, as Lloyd von Scheliha, product manager for Rain Bird's rotors explained: "In many instances, superintendents can simply drop the new Rain Bird 751 internal assembly into their existing rotor cases, saving both time and money."

Rio de Janeiro 2016

Olympic decision imminent

The executive director of the International Golf Federation, Antony Scanlon, says that a decision on selecting a venue for golf's return to the Olympics at Rio de Janeiro, Brazil will be made "as soon as possible". In an interview published on the *Golf360* website in September, he stated: "I assume within

the next couple of months we'll have the location of the venue identified, and then we'll move forward with what modifications or designs are required." When questioned on the possible designers of the venue, Scanlon admitted: "I'm not aware of any that have been given to us. They may have been given to the organizing committee."

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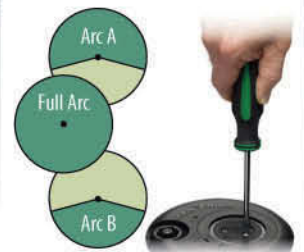
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Golf in China

ASGCA architects help China boom

ASGCA architects are making a huge contribution to the current golf development boom in China, which was the focus of a recent article in *Golf Course Architecture* magazine.

"Every third booth at the recent China golf show in Beijing seemed to be a golf course architect," said American designer Dana Fry, ASGCA, who, like many of his colleagues, is currently spending a high proportion of his time in the country.

Brian Curley, ASGCA, of Schmidt-Curley Designs is leading a project at the world's current hotspot for golfing development, Hainan Island. With a tropical climate—and thus the potential for year-round golf tourism—Hainan, long a sleepy agricultural backwater, has been designated as a special tourist development location. Golf is playing a massive part in this process, and, indeed, the government has officially lifted the golf course construction moratorium on the island.

With six courses already either open or just about ready to open, Mission Hills Hainan may yet end up being even larger than its progenitor in Shenzhen on the mainland. "When we were doing Mission Hills Shenzhen, we hired a shaper who showed up to shape with five surfboards—and every chance he had he'd go down to Hainan, and he'd come back telling me how great it was," said Curley. "So



Six courses are already open at Mission Hills Hainan

I kept saying to David Chu, the chairman, that we should do something down here."

"When the chairman decided to go with Hainan, we took a big tour round the island—I think I've seen every piece of property there is round here," Curley added: "Architects are always beefing about not being involved in site selection, but we were totally involved in this one."

Chinese golf has been almost entirely about land speculation, with the golf courses themselves generally regarded as an amenity more than a central part of the business plan. But Brian Costello, ASGCA, of JMP Golf Design reckons the Chinese golf industry is maturing pretty rapidly. "There's a desire for golf for golf's sake, and I'm sure it will happen," he said. "Are there golfers who would be interested in that? Absolutely."

And Costello said plenty of Chinese people get what golf is really about. "We have a client for whom we're doing our third project," he said. "We took him over to Scotland to play golf, and we were concerned about how he would react, but he retooled his swing to give a lower ball flight, and he loved it. They're travelling and experiencing great golf courses, and bringing that knowledge back, and realising that what they have here doesn't match that. There are wonderful sites becoming available, and it's a pleasure and a privilege to be able to build golf on them."

Content extracted from the article 'China, golf's wild east' which appeared in the July 2010 edition of Golf Course Architecture magazine. For more, visit www.golfcoursearchitecture.net.

Guidelines for hiring available now

Those interested in hiring a golf course architect for a golf course development or remodeling project can benefit from a free, easy-to-use form offered by the ASGCA. *Request for Proposal for Golf Course Architectural Services* is a comprehensive document designed to help decision makers—developers, owners, superintendents or managers—address key elements of a project, including general notice, scope of services, owner's responsibilities, submittal requirements and the selection process.

ASGCA can also assist those preparing the request for proposal on creating the most comprehensive and efficient distribution list to make sure recipients are the most knowledgeable and well-prepared to bid on the proposed project.

The complete document, which provides a thorough list of areas to be reviewed in detail by golf course owners/managers to help solicit competitive bids for the benefit of the project and the public, is available for free download at www.asgca.org.

Golf Architects Spread their Wings

Delivering Value | Adam Lawrence

Around the world, golf course architects are finding that the key to success is being a trusted advisor to clients on more than just where to place bunkers

On one level, golf architecture is a very specialized profession. It might seem that the golf architect, whose job is focused on one task—getting the best and most efficient design for a particular client on a particular piece of property into the ground—would be ill-placed to take on other roles. But in fact, the sheer variety of skills needed by golf architects means they are often the best people to resolve problems of many kinds on a job—as many are proving in an environment where new course construction is slow in some parts of the world.

To be a success as a golf course architect requires a broad palette

of attributes, some of which, at first glance, might not seem to fit together too well. The sales skills required to persuade clients to hire you in the first place don't always go with the kind of creative, artistic personality type that would be led to design as a career, and those artistic skills aren't an obvious fit with the kind of engineering abilities—understanding irrigation and drainage design, for example—that modern architects need.

But the nature of the golf development industry is that the people who have been successful over time have had little choice but to acquire and develop those skills. Even the largest golf architecture practices

are, in reality, small companies by the standards of the economy as a whole, and a substantial proportion of the industry consists of sole practitioners or two/three person firms. Combine this with the very large scale of most golf developments, and it's easy to see why golf course architects have had to become masters of more than one trade to survive. It is common for golf architects to bring to the party education and training in disciplines as diverse as engineering, landscape design and environmental design.

A classic example is in the case of site masterplanning. Land planning of developments is a big business, and goes back at least a century. But





At Lookout Mountain in Arizona, Forrest Richardson, ASGCA, is engaged in a project that will help save the operation ten million gallons of water a year

on projects where golf and housing are being developed together, a common complaint is that the course is compromised to benefit the real estate. On one level, this is only natural—the developer is expecting to earn his return from the homes rather than the golf, but sometimes a more flexible mindset is beneficial to all concerned. Take the new Verdura golf resort in Sicily, developed by British firm The Rocco Forte Collection. At Verdura, golf course architect Kyle Phillips, ASGCA, was responsible for the overall site masterplan and, by pushing the hotel buildings back a short distance away from the coastline, was able to use the whole

of the waterfront property for golf holes. This made Verdura's two golf courses significantly more dramatic and memorable—a vital consideration for a project that is aiming to attract golf tourists to a destination that has no golfing heritage. But it didn't come at a cost to the appeal of the resort's luxury hotel, as Phillips realized the tilt of the land meant every room in the hotel could be provided with a sea view in any case. The resort's planned villas have been located in a plot of land to the side of the golf courses, close to the clubhouse facilities, which should result in an appealing village feel—again, a bonus, as customers buying property in Italy are surely

looking for a traditional environment.

A rather different example of a golf architect taking on a wider role can be found at the Tapiola Golf Club project in Espoo, Finland. A relatively low-budget project, Tapiola, which has been in planning for more than ten years, is being built on a landfill site not far from the Finnish capital, Helsinki. It is designed by American architect Tim Nugent, ASGCA—but Nugent's job is extending way beyond placing bunkers and providing plans to a contractor from an office on the other side of the ocean.

Instead, Nugent has relocated to Finland for several months and is shaping the course's greens



At Stensballegaard in Denmark, Rick Baril, ASGCA, advised on rustic bunkering to reduce the maintenance requirement and at Verdura in Sicily (right), Kyle Phillips, ASGCA, created a masterplan that made best use of the land available

WHAT ARE GOLF ARCHITECTS DOING FOR CLIENTS?

- 97% Improving or expanding practice facilities
- 93% Adding new tees for juniors, seniors etc.
- 93% Discussing irrigation upgrades
- 93% Discussing turfgrass reduction
- 86% Making recommendations for cost savings
- 83% Developing long-range masterplans
- 83% Discussing turfgrass selection and overseeing regrassing
- 69% Changing courses to improve pace of play
- 62% Seeking out specialists to advise on water conservation
- 55% Assessing future infrastructure needs
- 55% Conducting land planning assessments

Source: ASGCA member survey

personally, saving the client's money on additional fees and potential rework charges that could arise should a different shaper misinterpret his design intentions. At 135 acres, the golf course is compact, and was made even more so when a falcon's nest was discovered behind the site of the planned twelfth green. "I hope Tapiola will be a good example of the direction new courses should be headed—fun and playable for everyone, but with just enough to keep good golfers interested," he says.

Because of their place at the center of a project team, golf architects are well-placed to act as the client's eyes and ears, spotting potential problems and opportunities as they arise. Given the pressure the golf industry is under in many parts of the world at the moment, course audits by architects are proving crucial in helping owners understand how they can reduce costs by cutting down on water usage, altering the presentation of hazards and other aspects of the course design, and even reducing the amount of turfgrass that a course needs to maintain. For example, at the new Stensballegaard course in Denmark, designed by Rick Baril, ASGCA, the

large bunkers are to be left essentially as raw hazards. At Baril's suggestion, the owners of the course have embraced a very old-fashioned style of bunker maintenance—they will be raked by the greens staff, but no rakes will be provided on the course for players to use. "Bunkers are hazards," the club's policy document states.

Turf reduction is a hot topic around the golf industry. Especially in the kind of hot, dry climates that attract so many tourists to play golf, every acre of maintained turf is a big addition to the cost of running a course. In Arizona, as is well-known, a hard limit has been imposed by regulators on the amount of turfgrass courses are allowed to maintain, but in many other areas, developers and operators are addressing turfgrass reduction programs for hard economic reasons. At the recent 'Golf in the Middle East: The Next Generation' seminar organized by *Golf Course Architecture*, Toro and Thomson, Perrett & Lobb, keynote speaker Rob Shuttle of Abu Dhabi developer TDIC told the audience: "Golf course development cannot continue on the premise that bigger, greener and longer is better."



Shuttle added that TDIC's future golf development plans would seek to minimize irrigated turfgrass."

Phoenix-based architect Forrest Richardson, ASGCA, is at present engaged in a project at the Lookout Mountain course in Scottsdale, replacing a number of ponds on the golf course with hazard complexes consisting of bunkers and native desert areas. The alteration is expected to help the operators save over ten million gallons of water each year, making the course more sustainable both in environmental and economic terms.

"Our value has always been something in addition to design; it's our full service in bringing the project together," says ASGCA Past President Jeff Brauer. "This is evidenced by the fact that we get about ten percent of our fee for concept design and the rest for construction documents and oversight. Owners have always paid for the ability to (with apologies to Larry the Cable Guy) 'Get 'er done.' Someone has to translate grand visions to percentage of slope, width of clearing, quantities of work, and so on. It can be done on the fly by a contractor, or by using generic quantities, which is OK as long as the

project encounters no difficulties, but it's when things are different that a golf course architect can provide a well thought out technical solution for the vision. In addition, current events show what happens when oversight of big financial deals goes without adequate supervision. The same is necessary in golf construction, and it has never really gone away. There's an old saying: 'You don't get what you expect, you get what you inspect'."

With the sustainability of golf so high on the priority list of everyone within the industry, the wide-ranging skillset of golf architects in this regard can be of great help. "I have assisted clients with assembling integrated pest management programs, certifications such as Audubon Cooperative Sanctuary, energy audits, and lake and pond management services," says Scot Sherman, ASGCA. "On one project I recently hired and managed a certified arborist to inventory and evaluate 900 trees. The goal is to extend the life of these 'geriatric' trees, so a plan for each one was needed along with a budget and schedule for implementation. My connections were key to providing this service to sustain these important trees." ●

GOLF ARCHITECTS WEAR MANY HATS

Helping clients select other consultants for projects, such as buildings architects, civil engineers, irrigation designers, mechanical engineers, environmental consultants, landscape architects, and even interior designers.

Long-term master planning: clubs know they need to improve their facilities, but don't always have the cash or the ability to do it in one fell swoop. Hiring a golf architect can help them create a document that will guide course improvement activities over the long term, perhaps even up to twenty years, prioritizing high-impact work.

Interviewing and selecting contractors: golf architects often know firms that perform special services such as building rock walls, water features, bridges and outbuildings, and can connect clients with these firms. This can be especially helpful for facilities that are upgrading their aesthetics and trying to gain ground in a competitive market.

Assisting with design and renovation of clubhouses and other amenities, such as maintenance buildings. Being immersed in the business of golf, architects have a unique, all-encompassing perspective, and have an intimate knowledge of what does and does not work functionally and often a knowledge of local building codes and regulations.

Project management: leading an entire development, renovation, etc. from beginning to end if necessary.

Assisting with graphic communications such as logos and imagery: architects are often connected to artists and professionals who can assist a client with printed logos, artwork and course furniture.

Media relations: architects are often well connected with golf media.

“ The 2005 Golf Economy Report valued golf’s direct economic contribution to the U.S. economy at \$76 billion

Golf and the Economy | Joe Steranka

Golf: more than just a game



Joe Steranka

Now in his fifth year as The PGA of America’s chief executive officer, Joe Steranka’s dedication and service to the Association’s 28,000 PGA Professionals as well as the global golf industry includes his role as Chair of the World Golf Foundation and member of the leadership teams for the World PGA Alliance and the International Golf Federation’s Olympic golf bid.

The golf industry has a profound, positive impact on America’s economic, environmental and social agendas. With one million jobs directly connected to golf, our sport has a substantial impact beyond the competitive and recreational benefits of participation. Job creation, tax generation and tourism activation are all impacted by your local golf course. Yet many people are unaware of golf’s major contributions to the American economy.

In 2005, the Gulf Opportunity Zone Act was passed. This Act allocated tax benefits and relief for businesses that had been affected by Hurricane Katrina. However, the bill specified that tax benefits would not apply to golf courses or country clubs, grouping those facilities in with massage parlors, hot tub facilities, tanning salons, liquor stores and gambling establishments as businesses that would receive no benefits. Golf courses that were in the disaster zone were denied access to tax breaks that included accelerated depreciation, deduction of demolition and clean-up costs, operating loss carryback and employee retention tax credit.

The Gulf Opportunity Zone

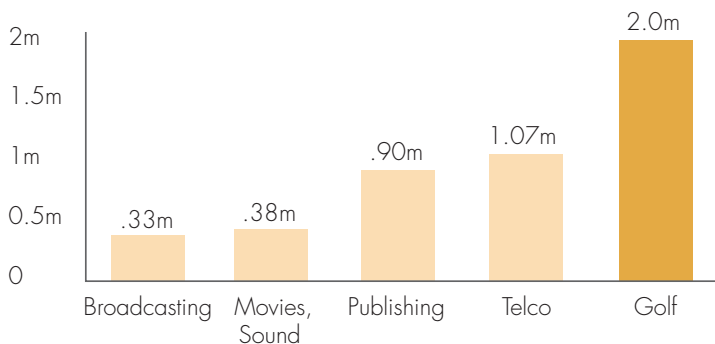
Act pointed out to golf’s national associations that we could no longer solely focus on the promotion of the sport of golf, but instead needed to put some of our resources toward promoting the industry of golf. So, we worked with Golf 20/20 (which is run by the World Golf Foundation) to design a comprehensive analysis of golf’s contributions to the U.S. economy that would show how golf benefits society.

In conjunction with research partner SRI International, Golf 20/20 released the 2005 Golf Economy Report, which was unveiled in 2008. The report valued golf’s direct economic contribution to the U.S. economy at \$76 billion, its benefits including the provision of two million jobs and a wage income of \$61 billion. That is larger than newspaper publishing, performing arts and spectator sports, and the motion picture and video industries.

Additionally, 22 state golf economic studies have been completed by SRI to date, with additional state studies currently being conducted. The tremendous impact golf has on the economy has been consistent across every economic study that has been completed. The economic reports being

Major employer

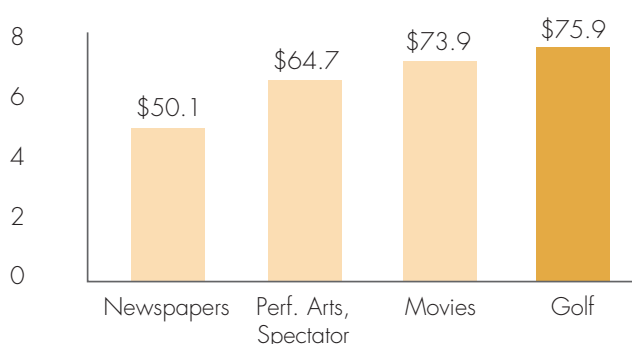
Golf is responsible for two million jobs in the United States



Source: www.wearegolf.org

Economic boost

Golf contributed more to the US economy than the movie industry



Source: www.wearegolf.org

used at the local, state and national levels are eye-openers for elected officials, media and business leaders alike. When Florida Governor Charlie Crist attended the 2010 PGA Merchandise Show, he marveled at the fact that one in 85 Floridians over the age of 18 have jobs that are connected with golf.

Is the state of Florida any different than Wisconsin, New York or Connecticut? Not according to Golf 20/20 state economic impact reports that we have released this year. For example, the Connecticut Golf Economy Report showed the state's golf industry generated a total economic impact of \$1.1 billion, supporting nearly 11,570 jobs with wage income of \$336.6 million in 2008.

The numbers also were impressive in the New York Golf Economy Report, showing the size of the Empire State's direct golf economy to be \$2.9 billion, generating \$5.3 billion of direct, indirect and induced economic output. The sport accounted for nearly 56,600 jobs and \$1.6 billion in wage income in the state, and the economic activity supported by golf was on par with the architectural services industry (\$2.7 billion).

At the 92nd PGA Championship in August, we were joined by Wisconsin

Gov. Jim Doyle in announcing that golf generated a total economic impact of \$2.4 billion, supporting more than 38,400 jobs with \$771.5 million of wage income in 2008. That makes golf comparable to revenues generated by other key industries in the state, such as medical device manufacturing (\$2.4 billion), corn production (\$1.7 billion), and even breweries (\$851.3 million)!

In each of these states, and in every other state surveyed thus far, golf is a key industry contributing to the vitality of the state's economy and it is important that this is seen by the country's elected officials. To accomplish this, the golf industry has come together in an unprecedented way to form the We Are Golf coalition to educate policy-makers on golf's contributions to communities across the country when they are developing and advancing important legislation—just as all small businesses want.

We Are Golf also is working to share information within the golf industry so that the members of the coalition are better informed on issues of concern.

We are in a time of unprecedented government involvement in the business sector, with a seemingly endless amount of legislation and regulation impacting the golf industry and small businesses.

Golf must have a seat at the table as those policies—tax, environment, workplace, trade, trademark, health care—are being developed and implemented, because the industry has something valuable to add to the dialogue and can benefit from, and avoid harm by, engaging in the debate.

The coalition's Web site, www.wearegolf.org, plays an integral role in information and advocacy efforts and features the true 'faces of golf,' the men and women whose livelihood depends on golf. This is about the PGA professionals, wait staff, golf course clubhouse staff, maintenance workers, golf course architects, superintendents, and equipment company employees—it runs the gamut of the business of golf.

With the two million total U.S. jobs generated by the multi-billion-dollar industry, the nearly 16,000 golf facilities and more than 28 million people who play the game, We Are Golf hopes to utilize golf's vast grassroots network in communities nationwide to improve the understanding of golf's multifaceted benefits to the economy, environment and our personal health. That spreads the positive message of We Are Golf and the vital impact of the golf industry. ●

Flood Management | Adam Lawrence

Weathering the storm

The days when a golf course was simply a place to play golf are long gone. Today's golf courses must pass muster on many other different levels; rehabilitating former industrial sites, providing pretty views and separation for surrounding real estate, and being an oasis of green open space among often crowded and polluted cities. But one of the most important 'additional' functions of golf lies in the potential of courses to act as reservoirs for floodwater in times of extreme weather.

Storm drainage is a vital part of town planning. Understanding where water will go in the event of heavy rain is a complex process, and urban environments old and new need to find ways of keeping or getting water away from housing and commercial property. Put simply, if a golf course floods, it's bad news for golfers—but if a town centre floods, it's bad news for all inhabitants!

The sheer size of golf courses makes them powerful tools in the armory of urban planners: a 150-acre golf course can potentially detain a lot of water, enabling the controlled release of floodwater into normal drainage channels when it is safe to do so. And, around the world, golf architects are coming up with innovative schemes to help towns and cities protect themselves against flooding, while also providing great places to play golf.

Take the Dubsdread municipal course in Orlando. Once the site of the Orlando Open, and closely connected with the careers of Ben Hogan, Sam Snead and Claude Harmon, Dubsdread was extensively redesigned by Mike

Dasher, ASGCA, in 2007. The problem: the growth of housing in the area and the forthcoming widening of the nearby interstate highway created a significant stormwater problem, so the city hired Dasher to retro-fit a storm drainage solution. Storm water running into nearby Little Lake Fairway is now filtered through a series of ponds on the golf course, which helps to purify the run-off, as well as achieve a controlled discharge of flood. This is despite the fact that Dubsdread sits on a tiny plot by modern standards—Dasher built a lake that also serves as the practice range (using floating balls), to cleverly kill two birds with one stone.

Elsewhere in the US, there are other examples of ASGCA architects finding solutions that provide efficient storm drainage and good golf alike. Deerpath Golf Course in Lake Forest, Illinois, was routinely flooded by runoff from a nearby hospital campus until former ASGCA President Bob Lohmann and his firm Lohmann Golf Designs (LGD) renovated the course. LGD constructed a one-acre retention pond and several acres of man-made wetlands to serve as an attractive, effective overflow network. Ducks, heron and egrets have since found a home at Deerpath, and the wetland system is working effectively to filter the polluted off-site water before it re-enters the nearby Skokie River.

The stormwater issue is even more pressing in some other parts of the world. In India, where open drains are commonplace, flooding brings with it major problems of pollution as 'black water' (sewage) contaminates other watercourses, an issue made more intense by the Indian climate, with

sustained heavy rains and associated flooding during the monsoon season: golf courses can help detain and filter this water.

Around the world, governments have imposed stringent controls on the movement of water into natural courses. It's common, for example, for golf courses to be told that no water applied to the course should be allowed to enter a natural waterway until it has been filtered, so that any residue of pesticides or fertilizer applied to the course is kept out of streams and rivers. In Korea, though, the situation is even more severe. There, no rainwater at all is allowed to escape the golf course site without filtration—all water that enters the course must be captured and detained. Naturally, regulations of this kind put great pressure on the course designer to come up with creative solutions for water management.

At Bigwin Island Golf Club in Canada, ASGCA Past President Doug Carrick faced an especially severe challenge; how to build a golf course on a 500 acre island surrounded by a pristine



“The sheer size of golf courses makes them powerful tools in the armory of urban planners: a 150-acre golf course can potentially detain a lot of water

lake—protecting the lake shoreline from erosion during construction—while ensuring that runoff water from the course was thoroughly filtered before it was discharged into the lake. Yet from a golfing point of view, the lake shore obviously offered some of the most compelling land.

In Vietnam, very close to the centre of Ho Chi Minh City, a new golf course project is taking shape. Jeong San Vina Golf Club is located on an island in the Saigon River, directly between the city’s expatriate district and its new international airport.

Course designer David Dale, ASGCA, is building Jeong San Vina along a man-made waterfront with a 50-metre natural buffer and overarching tropical garden landscape.

Jeong San Vina’s progress—the course should open in 2011—has been additionally complicated by the extraordinary engineering efforts the site requires. According to Dale, more than 1.5 million cubic meters of fill were required to build up the site and create the waterfront landscape.

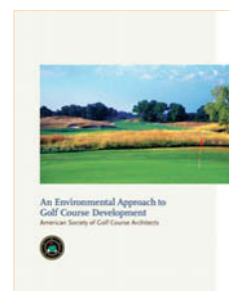
“All of this sand was dredged from

the Saigon River north of our island, then transported by boat and pumped onto the site in a watery slurry, which is spread around the property by a network of giant piping,” Dale explained. “It’s a pretty impressive process. There were some 20 cubic meters of fill per boatload. Do the math. When you do, you can understand why it’s taken two years to complete the reclamation.”

Spreading the fill around this site, in the context of golf construction and shaping, is nearly as complicated as getting it there. According to Dale, because of the very high water table, no more than four meters of fill are allowed anywhere on the site, lest that spot recede. “This is not the sort of project that can be improvised in the field,” Dale says. “The grades of our architectural drawings must be extraordinarily precise, and each green site will be supported by pilings to support and reinforce elevations that will exceed the four-meter limit.”

“The golf holes must work in the context of practical environmental matters,” says Dale. “The wetlands at Jeong San Vina, for example, were

created so that when the river rises to its highest point, water will be accepted onto the course site and into this network of wetlands. It’s a very attractive, totally golf-centric form of stormwater retention capability. What’s more, our lakes are set higher than the wetlands. When the lakes overflow, they release into the wetland network.” ●



ASGCA

ASGCA’s booklet *An Environmental Approach to Golf Course Development* includes a detailed case study on Bigwin Island, and several more examples of golf’s important role in stormwater management. To download it, visit www.asgca.org.



“The flow of courses is about rhythm, balance and sequence. A routing plan must give careful attention to each

Pace of Play | Bill Yates

Manage by design

How can a spectacularly designed course with impeccable conditioning produce an indifferent or even a bad playing experience?

‘It took forever to play; we had to wait on every shot,’ players grumble as they hurry from the eighteenth green to the parking lot and then to the exit gate, checking their watches. Will these players ever return? Maybe. But an opportunity to gain loyal customers has certainly been missed.

There’s a natural tension that exists in the relationship between golf course architecture and golf course management. The origin of that tension is the fact that the golf course architect determines how long it *should* take to play a course, while the golf course management team grapples with how long it *does* take to play the course. Somehow these two times are never the same.

Based on the playing length, location and difficulty of obstacles, and travel distances from greens to tees (all elements of the routing and design), an objective measure of the

time it should take to play can be calculated. Obviously every course will have its own unique time, or Pace Rating (created by the USGA).

But the tension is this. From opening day, the course management team’s daily practices are what will determine how long it actually does take to play the course. However, those practices need to be tailored to the unique demands of the design. Then, careful day-to-day hands-on management is required to achieve the optimal Pace Rating.

Forrest Richardson, ASGCA, thinks designers and managers have little clue as to the real issues. “Many of the beliefs of golf designers and managers with regard to slow pace are pure bunk,” he says. “We have grown up believing that an opening hole par three is bad, that too many par threes are bad, that it is the golfer who is mostly at fault. We even believe that the rude marshal who travels about the course glaring at players is somehow the answer. In reality, when you view the problem from a scientific viewpoint, you find

how wrong many of these beliefs are.”

“A course that has long walks might feel quicker than a contiguous course because of waits,” he adds. “So what architects need to do is to design a course that has a good natural flow, and where waits are minimized.” In Richardson’s book *Routing the Golf Course* he writes: “The flow of courses is about rhythm, balance and sequence.” “A routing plan must give careful attention to each,” he adds. “Without these qualities, the golf course might as well be an ordinary maze and the golfer a rat looking for cheese.”

Bobby Weed, ASGCA, has plenty of experience of designing courses that must cope with slow play, having spent several years as chief architect for the PGA Tour. “The single most important aspect of golf course design may be the time spent routing,” he says. “Many projects today are dependent on real estate to finance the golf course and thus incorporate road crossings and sprawling, linear layouts to create development frontage. The core



If golfers have to endure excessively long waits, an opportunity to gain loyalty may be missed

golf course is somewhat rare today. Certainly, where possible, minimizing the green to tee distance is the favored design fundamental. To achieve this, it is preferred to route the golf course first or in conjunction with the overall land use plan. Given today's golf market, it is absolutely essential to route courses that efficiently use the land, thereby allowing players to use their time efficiently. Developers who insist on the tired old formula of lining courses on all sides with development are quickly killing the game by making it too time consuming and costly. No matter where in the world it is built, a golf course should always enhance a development's bottom line while also maintaining its own."

Today, the natural tension between golf course design and management can be eliminated. During the design phase, technology can be used to predetermine the impact of alternate design options on future management practices. Play can be simulated on new or remodeling plans to determine and document

the optimal design choices and management practices to deploy. For example, in a re-routing it is possible to forecast pace and 'see' how a par three or par five hole at a particular point on a given routing option will affect the flow of play. With computer simulations able to assist in selecting the appropriate starting interval for a particular design and help in fine-tuning hole length options, this is powerful information. And it can all be accomplished before any work gets done to make physical changes.

Ultimately, having the right starting interval and having accurate monitoring tools at the outset will enable the management team to reduce on-course waiting, optimize round times, and maximize the revenue-generating utilization of that design.

So along with a breathtaking course design, architects can deliver a recommended set of best operational practices and management tools that can be used from opening day. Then players will come off the course saying: 'What a great course and what a great experience; I'll be back!' ●



Bill Yates

Bill Yates is the founder and developer of Pace Manager Systems®, based in Pebble Beach, California.
www.pacemanager.com

“My work and what I see from other architects has shown time and again the incredible value a golf course has

Golf Course Value | Erik Larsen

Value of the golf course

During my year as ASGCA President I am proud to be working with our members and other partners in promoting the ‘value of the golf course,’ an effort to demonstrate the benefits to individuals and communities provided by the course. The three pillars of this value—environmental, social and financial—cannot be emphasised enough.

My work and what I see from other architects has shown time and again the incredible value a golf course has for everything it touches: people, environment, wildlife, the community, the local economy and more. However, there remains an audience which views the design and construction of a golf course as an intrusion that takes more from the community than it gives—which is why architects need to be educators.

Environment: The storm water retention benefits afforded by a golf course dramatically illustrate the environmental value to surrounding areas. Heavy rains this past summer in parts of the U.S. led to record flooding. However, in areas where a golf course was designed to handle storm water, homes avoided damage. In Brookfield Hills in Wisconsin, seven inches of rain in 24 hours left the course unplayable for several days, but the basements in neighboring homes remained dry.

Some say a golf course is an infringement on green space. And while it has been pointed out in the past how a course can enhance green space rather than inhibit it, the public needs to begin thinking of a golf course as green space.

At Chambers Bay in Washington (host to the 2010 U.S. Amateur and the 2015 U.S. Open), Robert Trent Jones Jr., ASGCA and Bruce Charlton, ASGCA have designed a walking-only course on county grounds. The course complements Puget Sound and works with the natural landscape, allowing for hiking trails and continued access to county grounds by non-golfers.

The finest example of a golf course interacting with players and non-players may be St Andrews, Scotland. It is not unusual to see people walking across the famed course on their way to the beach.

Social: Social and health benefits afforded by a golf course can easily be lost if they are not stated and repeated. Walking a golf course leads to better health. Anyone looking for a moderately paced, cardiovascular workout would be hard-pressed to find something better than walking the nine or 18 holes designed to work with the natural undulations of the land.

A course can also be used for other activities that benefit the community, like trails for jogging and cross-country



Erik Larsen

Erik Larsen is president of the ASGCA and executive vice president and senior golf course architect of the Arnold Palmer Design Company. He has been involved in the design of over 100 completed golf courses worldwide.

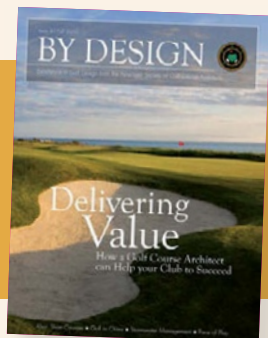
skiing or as concert space. The driving range at a golf course is a great place to bring in a portable movie screen. Invite area residents to the course for an evening’s entertainment under the stars, perhaps they will return for a lesson or a round of golf.

Financial: Each course has its own value that includes jobs, taxes, charitable fundraising, home values, hospitality/tourism and more. What would be the negative economic impact on all areas of a community if that course were not there?

ASGCA is working with our industry partners in We Are Golf to share our message with politicians and other decision makers. We Are Golf has also produced materials to help owners and course managers calculate the financial benefits produced for their community by a golf course.

As an association that loves golf and works to create sustainable layouts for others who love the game, ASGCA has seen firsthand how golf courses truly benefit their communities. It’s important to share this message with those who aren’t familiar with the positive benefits of golf courses.

Our next issue of *By Design* will feature more on the value of the golf course. We hope that it encourages you to continue thinking of ways in which you can promote the value of the golf course in your community. ●



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