
SUSTAINABILITY

in golf. through golf.

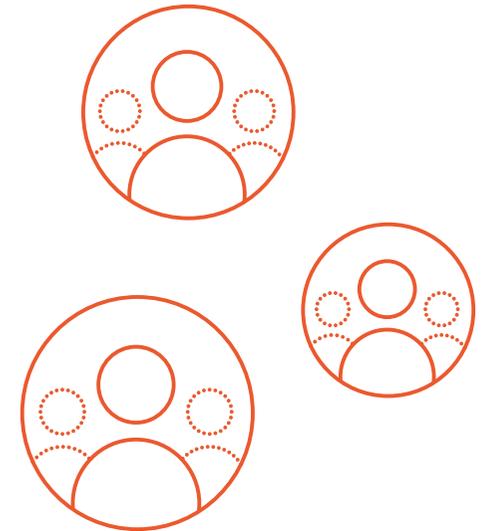


The Opportunity

The modern movement in sustainability is a clear opportunity to strengthen the image, influence and profitability of individual golf businesses and the industry at large. In the process, the sport can overcome a range of significant threats, such as restrictions on the use of resources, regulation, development control and negative public opinion.

Golf can instead be acclaimed and actively supported for embracing sustainability and delivering maximum social and environmental value, and for being an inspirational agent for wider behaviour change in society.

Golf can be a leader in many ways, from ecosystem services and conservation of wildlife; to health and well-being for all ages; to jobs and economic value through local supply chains, golf is good for nature and for communities.



Golf is a Global Community

- 213 million fans worldwide
- 80 million players
- \$70 billion per year.
- \$4 billion per year into charity
- 143,000 events per year

Since 2006, the GEO Foundation has worked continually to build on a history of social and environmental value at the roots of the game.

GEO Foundation is the only international non-profit dedicated entirely to providing a credible and accessible system of sustainability standards, support programmes, recognition, and capacity building for the golf industry.

Through its partnerships with leading environmental and sustainability organisations, GEO Foundation ensures golf's approach is credible, modern and mainstream.

GEO Foundation's programmes and partnerships are currently active in more than 45 countries and growing.

“ *We believe that, done properly golf developments provide multiple positive benefits to local environments and wider communities. Those benefits are complex and often interconnected but provide the opportunity to enhance quality of life and enrich landscapes and ecosystems.*

All over the world, ethical and environmental issues are directly influencing consumer choices. Resource costs are rising and governments are gaining votes with policies that protect our environment. Golf development businesses that proactively engage with these issues are better placed for success and to embrace the challenge.

Sustainability was part of golf in the beginning and it must be part of golf in the future, creating golf courses that respect their surroundings and honour the natural environment. ”



Our Role

- Facilitating widespread collaboration
- Connecting science with solutions
- Supporting the development of industry policy & strategy
- Helping craft new credible and inspiring communications

Global Support



Credibility

ISEAL Alliance

Credibility is at the core of the work of the *OnCourse® Developments* programme. Underpinned by the International Social and Environmental Labelling (ISEAL) Alliance, the processes, standards and assurance models are closely and continually monitored and recorded to maintain the highest available international standards for sustainability labelling.

Through open collaboration we have developed long standing, trusted and innovative partnerships with highly reputable organizations both within and outside the golf industry. The meaningful, specialized and highly relevant advice of these partners directly shapes the standards and process behind the programme - leading to the creation of a resilient support network which enables us to provide better service and visibility to *OnCourse® Developments*.

A Connected and Relevant System

- Highest standard of Sustainable Development
- Credible reporting and results
- Peer reviewed
- Independently assessed
- In line with Sustainable Development Goals

ISEAL's Credibility Principles



Other ISEAL Accredited Programs



Global Support



Design Industry Support



More than a game

GEO's work is aimed at helping to strengthen the future of the sport – improving reputation, unlocking cost-savings and efficiency, enhancing product and increasing external investment.

Bringing specialist golf and sustainability expertise, along with entirely non-commercial, fully customised industry solutions, GEO acts as a responsible, respected and highly accountable industry support group.

Leadership

Advising on a project approach and facilitating external relations with the governments and environmental communities.

Credibility

Drawing on research knowledge to guide the development and administration of ISEAL accredited Voluntary Sustainability Standards and an International Certification System.

Engagement

Developing and administering tailor-made support programmes for golf developments and renovations; club and course management and tournaments.

Recognition

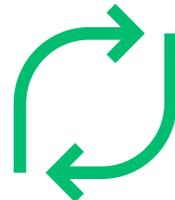
Gathering verified data and stories, that enables golf facilities and golf associations to widely, credibly and confidently promote their contribution and value.



Fostering Nature



Supporting Communities



Conserving Resources

Golf Development Role

- Support for permitting applications
- Public and stakeholder events
- Investor relations
- Sustainability reporting and coordination
- Sustainable design guidance
- Report and policy writing
- Strategic support for organisations
- Practical sustainability solutions
- Media relations

Golf Developments

Sustainability is a superb fit with great golf developments and successful golf facilities. Bringing environmental and social considerations into the heart of a project from the start can save time and money, during design, construction and into long-term operations.

The *OnCourse® Developments* programme provides customised project support and streamlined reporting. From the start, it helps projects plan, achieve and confidently represent their environmental and social value to governments and the wider community.



OnCourse® Developments



Successful participation in the *OnCourse® Developments* programme leads to the internationally recognised distinction of the *GEO Certified® Development* mark - recognising golf facilities that are driven by nature, resilient in operations and connected to true community values. At every stage, the programme framework allows fast and effective integration of key sustainability issues to benefit the project throughout.

GEO provides advice across all areas of sustainability, collaborating closely with the project team to help deliver their vision. Each work stage is independently verified by an assured verifier, delivering recognition and credibility for the project as it progresses.

All certification needs are guided, managed and coordinated entirely by GEO through the *OnCourse® Developments* programme - ensuring absolute compliance and confidence.

Project Steps

A: Preparation

1. Expression of Interest
2. Project Appraisal
3. **Registration**

B: Design

1. Initial team meeting
2. Develop goals/targets with team
3. Site visit with independent verifier
4. On-going liaison with project team
5. Finalise Blueprint V1
6. **Verifier approves Blueprint V1**

C: Construction

1. Construction team meeting
2. Record construction progress against goals/targets
3. Site visit with independent verifier
4. Finalise Blueprint V2
5. **Verifier approves Blueprint V2**

D: Completion

1. Gather final information
2. Site visit with independent verifier
3. **Verifier issues Certification Report**
4. *GEO Certified® development*



Development Benefits

Relevant

Integrated

Valuable



Fostering Nature



Supporting Communities



Conserving Resources

The added value of a transparent and holistic approach to a project, integrated with its environment is significant. This approach creates a streamlined development process helps ensure the long-term success of the project.

The communication of a new message about healthy lifestyles and environments is relevant to customers in the 21st Century. Realising that vision is helping to future-proof the project.

The delivery of social and environmental objectives is at the heart of modern, successful business planning and leads to significant benefits through public goodwill, business efficiencies, increased marketability and higher returns on investment.



Project Benefits

- Efficient operations
- Cleaner image
- Fostering partnerships
- Faster permitting
- International recognition
- Pride and global credibility
- Media and marketing value

Wider Benefits

- Cleaner environment
- Efficient use of resources
- Healthier lifestyle
- Community integration
- Strong supply chains
- Genuine experience
- Connection with nature
- Habitat remediation

Confidence



Quality



Prestige



Recognition

Communications

GEO Certified® Development mark comes with it a set of marketing assets for a project to use. They include presentation ceremonies, promotional talks at opening events, international press releases, branded flags, project plaques...

All of the project's achievements are proudly communicated across all digital and social media with a dedicated web page hosted on the *OnCourse®* online platform.

Leadership

The recognition of receiving the *GEO Certified® Developments* mark elevates your project profile, delivers a higher quality product and sets your project apart.

Acclaim

The marketing message and professional support of the *OnCourse® Developments* team will help tell your stories to a global audience across a credible platform, underpinned by figures that deliver the details.

Assurance

The facts and outcomes created by the project are independently verified, providing a strong and credible platform to confidently promote and celebrate the achievements of the project to the widest possible audience.

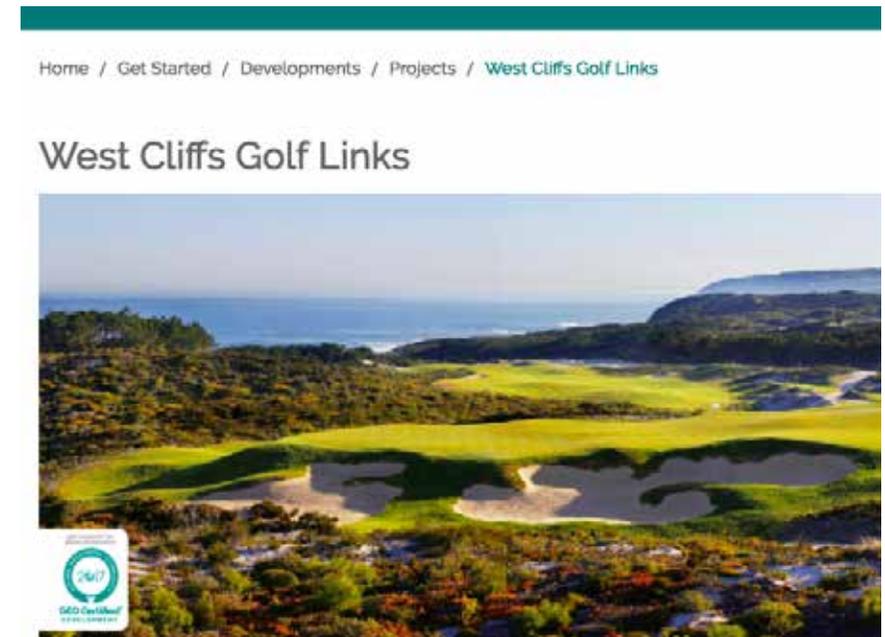
Certificate



Logo & Branding



Press Release / Perspective Article and Showcase Website



Social media



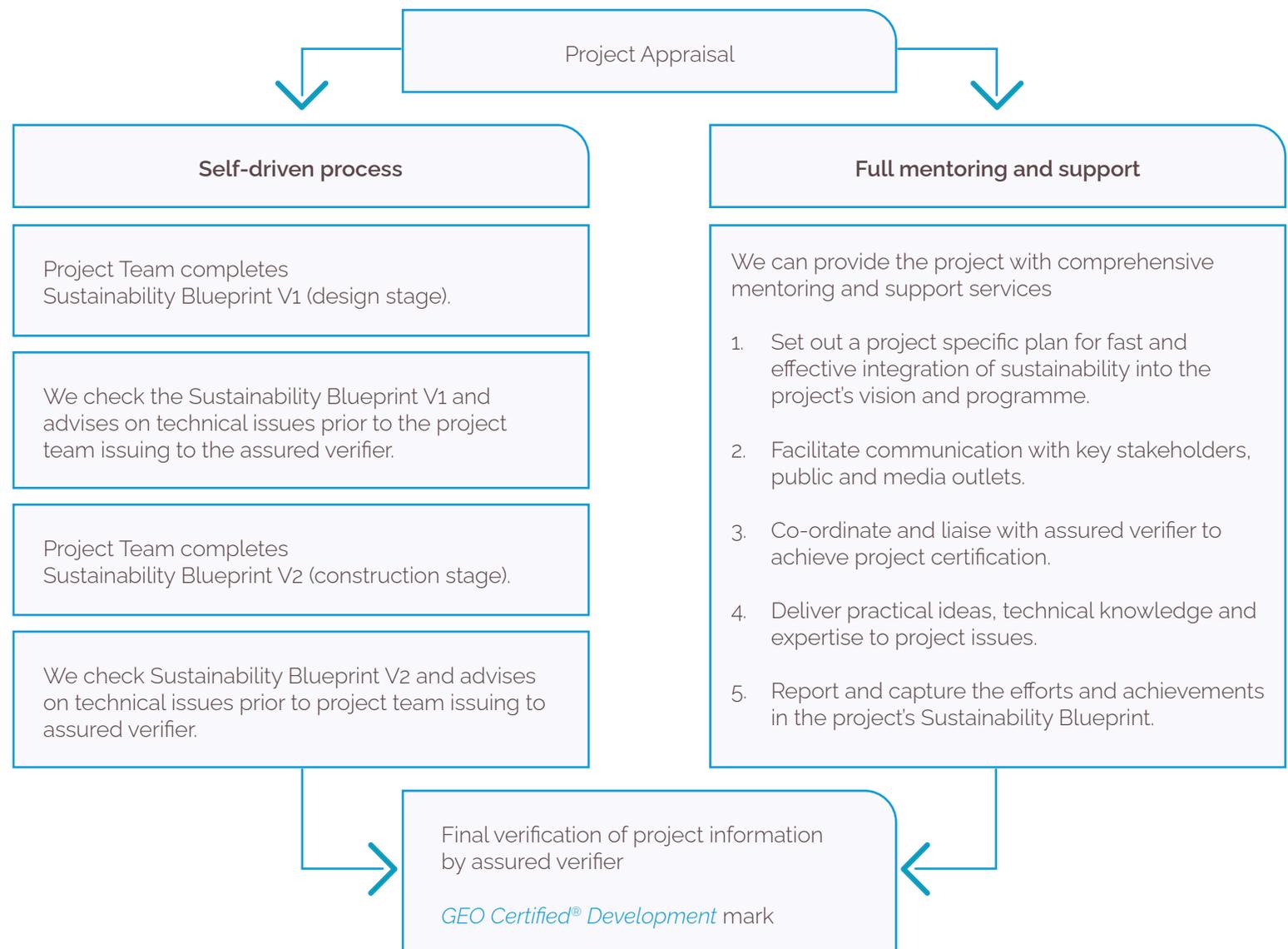
Application

The *OnCourse® Developments* programme is a flexible and adaptive programme that is tailored to suit all forms of golf development from a small 3-hole golf facility to a 54-hole resort or major renovation. What is important is the transparency of the programme and that can provide an approachable and affordable form of sustainable golf for all.

The key project decision that dictates programme costs is whether a project team will carry out the project reporting 'in-house' or whether they will prefer support from the *OnCourse® Developments* team. This decision is typically made after the project appraisal has been carried out and can be reversed at any point during the project. The chart opposite illustrates these two options.

Given the diverse nature of golf developments and renovations, all projects are encouraged to go through the free project appraisal stage before an exact cost can be ascertained.

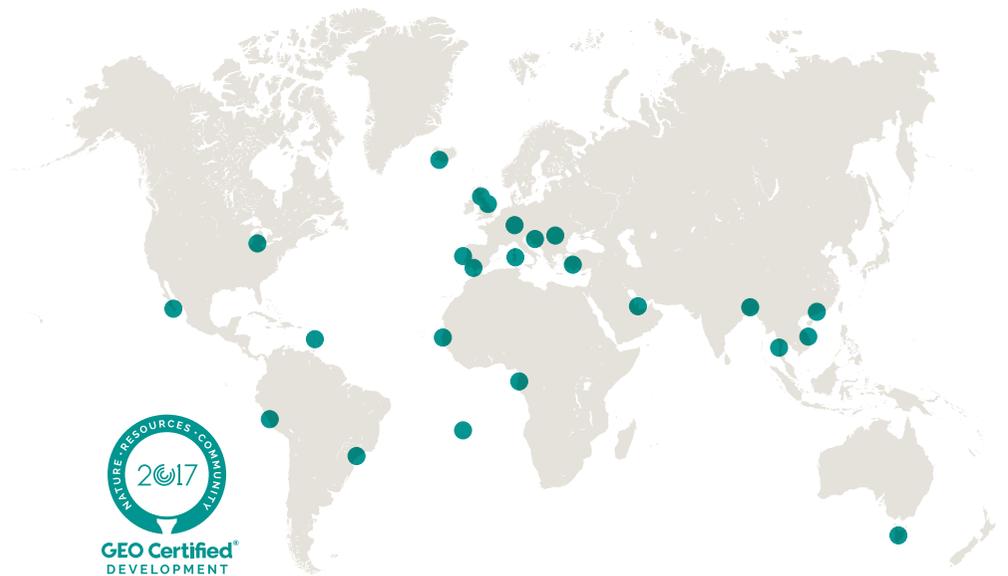
OnCourse® Development Application



Projects

In the 21st Century, more and more businesses, organisations and individuals are building sustainability into their day-to-day decision making.

Understanding how we do business is as important to today's customer as what we do. Below are examples of recent golf developments that have found 'being more sustainable' meant doing things simpler, better and faster.



Outcomes



Integrated local workforce - connecting with communities to embed the development into the local way of life.



Adopted local horticulture practices - a local biodiverse landscape creating a genuine golf experience.



Forged partnerships with local government to create new energy deal - generating income and improving relations.

Irie Fields, St Kitts | Architect: Gary Johnston / European Golf Design



Rio Olympic Golf Course | Architect: Gil Hanse



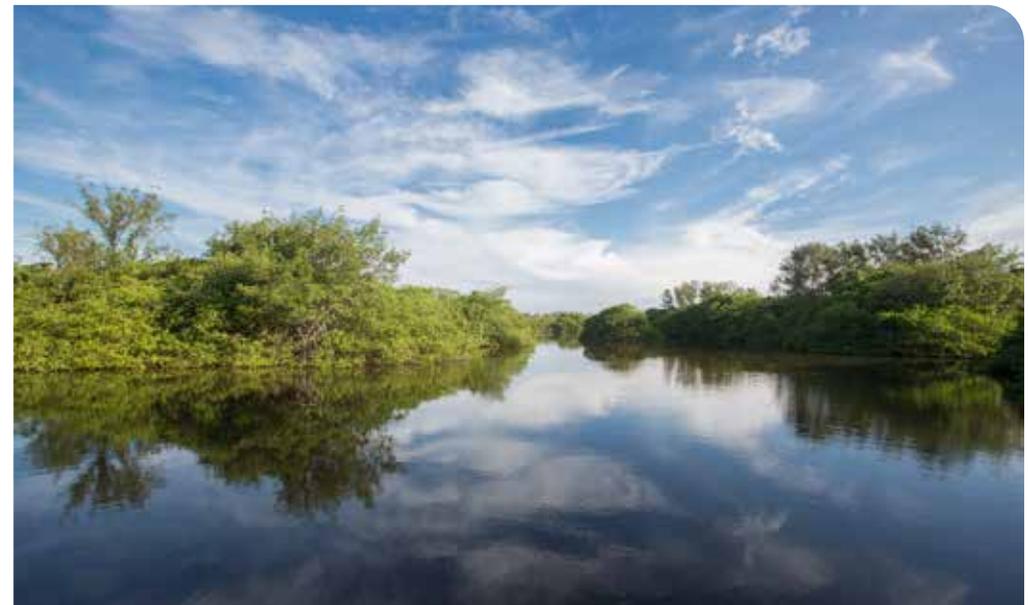
Developments



Rio Olympic Golf Course, Brazil Designed by: Gil Hanse

After more than a century of absence, the Rio Olympic Golf Course sets the stage for golf's return to the Olympics. The golf course is part of a new urban area included in the Rio 2016 master plan, which has sustainability at its core by increasing the inclusion of the community, the provision of residential, commercial and recreational areas, while regenerating environmentally damaged zones.

The project covers approximately 97 hc. and is comprised of an 18-hole championship golf course, 3-hole short course and practice area. Other elements include a clubhouse, golf academy and maintenance facility. Before the development of the golf course over 80% project area consisted of degraded land due to sand mining in the mid 1980-90's. The need for an Olympic golf venue postulated the opportunity to re-mediate this area and create a space that could provide social, environmental and economic benefits to residents and visitors alike.



Developments



Irie Fields Golf Course, Belle Mont Farm, St Kitts Designed by: Gary Johnston, European Golf Design

Irie Fields forms part of a larger resort development including a hotel and a range of residential properties located on a 400 ha site. Sustainability is fundamental to the developer's approach – expressed in an overall vision, which seeks to bring together community, culture, and mindful conservation of natural resources.

Identified as the core project in a wider development zone on the island (the Whitegate Development Area) which in turn forms an integral part of the sustainable development policy of the Government of St Kitts and Nevis (GOSKN), as set out in the National Physical Development Plan. This includes as one of the key goals "low impact tourism strategies that minimise environmental and socio-cultural impacts and take advantage of the unique qualities of the island".



Located on the north-west coastline of St Kitts, on the lower slopes of Mount Liamuiga. The principal elements of the development include an 18 hole golf course with clubhouse, farm, resort village, spa, hotel guest houses and villas. Conceived as a community-led golf resort delivered by Caribbean owners. Sustainability was integral, from site selection of the mono-crop plantation field to the employment of over 25 local residents as caddies and course guides. The golf resort host a community run farm providing locally grown product to the kitchens and much needed employment to local workers. There is a strong arts and cultural link with local arts group producing hand made wares that decorate and service the resort.

Developments



West Cliffs Golf Course, Óbidos, Portugal Designed by: Cynthia Dye ASGCA, Dye Design Group

Situated on sandy clifftops adjacent to the Atlantic Ocean, West Cliffs is fortunate to have a site rich in flora. The rich and vibrant landscape is a defining feature of the golf course. The colours and textures of the site that bring a unique character to this area have been allowed to flourish. The project has changed the landscape from an industrial like plantation character into a low coastal scrub landscape, diverse in flora and fauna. The opening up of the site now gives the visitor a closer to the ocean feeling with views from almost every point of the site down towards the ocean. The result is a links that is modest in its footprint but plays big and will provide a fun and fast surface that will be accessible to all players.

- ✓ Reinstated 15Ha of rare native coastal scrub habitat from pine plantation using the native seed bank found in the soil on-site
- ✓ 100% recycled water in the irrigation system and over 40 local jobs created in the 100% Portuguese operational staff team.



'This golf course has made it possible for a spectacular coastal habitat to be exposed and restored. This is an example of what responsible development should be. The design has gone beyond the boundaries outlined in the biological assessment to honor the vegetation that the assessment intended to protect. This is a very unique project in Portugal and one that will be honored globally for its environmental achievements.'

Cynthia Dye, ASGCA. Dye Design Group

Developments



Alan Robertson House, Scotland
Designed by: Kimber Golf Group

Allan Robertson House, provides a new world-class testing and research facility which brings together the existing operations of the Equipment Standards department of The R&A into a single location, and at the same time delivers an enhanced service to golfers, manufacturers and affiliated organisations. Site selection was a crucial early project decision, and the final choice of utilising an underused section of Kingsbarns Golf Links existing warm up area was instrumental in maximizing the potential opportunities, which covered all three sustainability pillars - nature, resources, and community.

- ✔ Created over 9,000m² of diverse new native habitats including rare orchids and wildflower species
- ✔ 100% recycled water and 100% of building's roofwater and car park surface water redirected into the attenuation pond.



The project is located at the far end of the 450m long existing Kingsbarns driving range, which is situated on the northern edge of the designated "Designed Landscape" of The Cambo Estate. The project resourcefully occupies the previously unused and semi degraded piece of land. A low profile and modular style building with extensive green roof, is situated below the surrounding mature tree line that surrounds the driving range field on the north, east and west sides. The facility extends to 2.25 hectares in total; comprising a test centre building of 22,750 sq. feet with green roof, a car park with permeable paved surfacing accommodating up to 30 cars and outdoor research areas including two par 3 length golf holes, bunkers, green complexes and teeing grounds. The project includes a 2.6 metre deep attenuation pond with marginal wetland, hedgerow and shrub planting adjoining the building and car park with woodland edge planting.

Developments



Ombria, Portugal Designed by: Jorge Santana da Silva (EIGCA)

The site, formerly a fruit farm, comprises natural landscape including a watercourse and a series of archaeological remnants related to early waterworks and farming. The resort, centred on a river valley surrounded by hills, is designed as a natural extension of the geography, with low-density bioclimatic architecture and the use of renewable energies, respecting the natural landscape, local culture and heritage. Sustainability is an integral part of Ombria's vision. All designers and architects involved in the planning phase are operating with the same shared aim: to create a new sustainable destination. The "Carved by Nature" vision draws inspiration from the features, forms, material and themes of the authentic Barrocal sub-region of the Algarve.

The restored river landscapes that run through the northern portion of the site are a key positive outcome of the project. A large portion of the site remains untouched and forms a 'green blanket' as a backdrop to the south and east of the golf course. This natural and semi-



natural habitat includes a few low-input tracks and trails for walking and other non-golf fitness activities. The overall design is a compact golf course with a modest footprint in terms of turfgrass. This results in a lower than average quantity of input and water use over time. The compact design also results in grading works that have been carefully designed to reduce disruption to the overall rolling landscape character and protected existing flora.

- ✓ Over 1,800 linear metres of riparian habitat restored and rehabilitated.
- ✓ Over 700 oak trees planted in a commitment to a 1:5.6 re-planting policy ratio.
- ✓ Local cultural heritage protected including: 2.8km of aqueducts; 4 watermills; 3 kilns; 100 linear metres of bridges and stone walls.
- ✓ 5,000 linear metres of public footpaths created.

Developments



Hoiana Shores, Vietnam

Designed by: Robert Trent Jones II - Golf Course Architects

The Hoiana Shores project is located on the central Vietnam coastline just to the south of the UNESCO World Heritage ancient town of Hoi An in the Quang Nam province on the other side of the Thu Bon River and close to the nearby Cu Lao Cham Biosphere Reserve.

The golf property is around 90 hectares with nearly 600m of beach front overlooking the Cham Islands. The site, formerly a shrimp and fish farm, with very little vegetation cover or remnants of the original native landscape that would have characterised the land in the past. The property will eventually host two small villa clusters alongside an impressive clubhouse design and academy set up that has spectacular views out to the South China Sea.

The course is an 18-hole golf course that a links land golf experience in a warm weather climate. The playing surfaces are all Zeon Zoysia turfgrass, giving low input surfaces with high performance playing conditions. The wild and windswept bunkers frame the holes and are continually shifting with the ever changing wind patterns of mother nature and the coastal influences. The course represents a truly authentic Vietnamese links experience for all golfers with naive planting and well trained and welcoming staff team.

- ✓ Restore 23 hectares of degraded former fish farming lands back to native coastal scrub vegetation
- ✓ Established a vocational training college with a 5-year commitment to train individuals who will be given preference in recruitment at Hoiana Shores.

Developments



San Bartolo Golf Facility, San Bartolo
Designed by: Piza Golf Design

The project at San Bartolo is the foundation of the Peruvian Golf Federation's (PGF) "Golf for All" programme which gives children aged 8 to 15 from low income households the opportunity to play golf and go to a school. The site is located in the district of San Bartolo 50km South of the capital Lima. In 2014 an ambitious project to upgrade the existing facility was started and that upgrade project is the subject of the certification.

The project covers 24.6 hectares of land with little of no vegetation. Previously an airstrip converted into the 9-hole golf facility. The land was provided to the PGF by the Peruvian Sports Institute (IPD) for the purpose. The project exists thanks to funding and donations, this influences the speed of progress and decision making on the project. The proposed upgrade will include 3,150yds Par 35, 9 holes and a 300yds driving range.

Qatar International Golf Course, Education City, Doha
Designed by: Jose Maria Olazabal

The golf course is located in Education City, just outside Doha. The site was an area of cultivation a "wadi" (a local streambed that remains dry except during the rainy season, a catchment basin). The site has suffered from severe environmental degradation, deterioration of vegetation and soil erosion. The golf development is part of Education city - a new urban area comprising of elite universities, several academic and training programs and the Qatar Science and Technology Park. The development will include an 18 hole championship course, capable of hosting major professional tournaments, a 9 hole practice course, a 6 hole executive course, a learning academy, a learning centre of excellence and a golf themed public park.



Facilities



Champion Course, PGA National, Florida Designed by: Tom and George Fazio (1981) / Jack Nicklaus (2014)

The Champion golf course at PGA National Resort & Spa lies in the southeastern corner of subtropical Florida. The course's many ponds and wetlands with associated uplands are directly connected to the Loxahatchee Slough – the headwaters of the National Wild and Scenic Loxahatchee River that feeds the Florida Everglades, a World Heritage Site and International Biosphere Reserve. Lush, flowering plants, abundant birds, and reptiles of every size are found at every turn of PGA National.

'Sustainability is key to the success of any modern business. Implementing sustainability practices across our course has led to drastic savings.'

Kathy McGuire – Sustainability Director, P.G.A National

- ✓ 100% of site's green waste is recycled and returned to the facility as mulch for organic fertiliser and soil amendments
- ✓ Energy efficient drives installed on irrigation pumps save \$18,000 per year in electricity consumption
- ✓ Course policy of firm, fast playing conditions has enabled less than 50% irrigation volume to U.S. average
- ✓ Conversion of turfgrass species has led to 35% reduction in water use, 30% reduction in fungicide use, 20% reduction in overall fertiliser use

Facilities



Mach Dunes, Machrihanish, Scotland Designed by: DMK Golf Design

The first true 18-hole links course on the west coast of Scotland for more than 100 years and the only one ever to be built on a Site of Special Scientific Interest (SSSI). Gone are the artificially lush coloured fairways and manicured greens so familiar to parkland golfers around the world, instead Machrihanish Dunes has gone back to the history books to create a course in keeping with the way golf began. No chemicals, pesticides, heavy machinery or even artificial irrigation systems are allowed on the 279 acres of windswept sand dunes bordering the Atlantic with panoramic views of the islands of Gigha, Islay and Jura. Instead nature and nurture have been combined to create a haven for both golfers and wildlife as rare Hebridean Black sheep graze the fairways and out-of-bounds areas protect rare orchids.

- ✔ £30 million investment generated £18 million per year to local economy for rooms, jobs, supplies and services to the resort.
- ✔ Just 2.5% of property was cultivated to grow turfgrass with no artificial drainage, fertilizer, pesticides or plant growth regulators used on the fairways.



"It was a real balancing act between the needs of the golf course and the natural environment - but in the end it was extremely worthwhile."

Paul Kimber – Golf Architect, DMK Golf Design

Facilities



Broken Sound, Florida Designed by: Gene Bates

Chosen as the Overall and National Private recipient of the 2017 Environmental Leaders in Golf Awards (ELGA), which are presented annually by the GCSAA and Golf Digest in partnership with Syngenta and Rain Bird's Golf Division. The golf and country club is home to the PGA Champions Tour's season opener - the Allianz Championship for 10 consecutive years - ranks as the only Florida or Southeastern U.S.-based ELGA winner at the national or international leader level.

'Having created the first industrial composting project in Florida, we continue to 'naturally' save lives and dollars while improving the quality of life and healthfulness of those who live, work and play within its community,

Shannon Easter – Maintenance Director and Environmental Consultant

- ✓ Filters two million gallons of reclaimed water per day from nearby city of Boca Raton, FL.
- ✓ 95% of waste is recycled, which is three times the statewide recycling rate for commercial businesses.
- ✓ 100% of products and services used in F&B, catering and maintenance equipment come from within 100 miles, with 30% within 10 miles.
- ✓ Installed solar panels on all weather stations, hot water for pools, clubhouses, fitness centre and spa.
- ✓ Installed 22nd beehives, which produce 1,000lbs of honey annually.

Facilities



Sea Pines Resort Hilton Head Island, South Carolina
Designed by: Pete Dye, ASGCA, David Love III, Mark McCumber, ASGCA

Home to three world-class courses, the Sea Pines Resort is famed for hosting South Carolina's only PGA Tour event The RBC Heritage presented by Boeing. In gaining the GEO Certified® standard the resort has shown its continued commitment to sustainable operations. One of the areas of particular success at the resort has been a sustainable waste management program. Eight on-site recycling centers are found across the resort, with electronic information boards communicating the success of recycling at the resort to visitors and staff.

"As the first eco-planned destination in the U.S., Hilton Head Island has been an environmental model for decades. The Sea Pines Resort continues that tradition and we're honored that the resort has achieved GEO Certified® for its sustainability efforts."

Bill Miles – President and CEO, Hilton Head Island Bluffton Chamber of Commerce

- ✔ Zero-waste to landfill aspirations resort wide meant recycling went from 90 tonnes of recycling in 2011 up to 425 tonnes in 2014.
- ✔ 100% recycled water for irrigation and water efficient fixtures, systems and fittings throughout the resort.
- ✔ Low-to-no lighting in sensitive natural habitat area such as along the beach front to avoid disrupting high priority sea turtle nesting sites.
- ✔ 60% of food produce is sourced from local area with over 200 intern positions and over 250 local staff employed the resort.
- ✔ Large and growing populations of bluebirds, purple martins and snowy egrets nesting on natural and purpose built nesting sites across the resort.

Core Team



Jonathan Smith

Known for a positive outlook, considered strategic direction with an ethos of collaboration and accountability. Speaking to diverse audiences from people on on-the-ground in golf, to UNEP, WWF and other NGOs and governments, Jonathan brings a passion for helping golf become a recognized leader in sustainability. Ultimately strengthening golf businesses, improving the reputation of the game, and making a difference in our world - in practice and by example, across golf's wide reach.



Kelli Jerome

Bringing experience from years in product management and strategic relations at Microsoft headquarters during the early years of the digital age, Kelli is now turned toward another important frontier, sustainability. Responsible for managing effective, efficient and nimble implementation across all of the areas GEO works in support of, to meet the strategic vision of stakeholders and the organization, she is hands on in managing our talented and growing team!



Sam Thomas

It is Sam's job to support and advocate sustainability in golf development, in both established and emerging markets, working with architects, developers, governments and tourism bodies. Sam works closely with individual developments whilst facilitating the evolution and promotion of best practice and standards. Sam has worked in the construction industry for over 12 years with award winning practices in architecture, landscape architecture, engineering and golf course design.



Jamie Graham

Contributing 15 years' of experience in marketing and communications for national and international brands, including copywriting, social media management, paid advertising and SEO. Jamie delivers the content and advises on the strategy for communication and global promotion of the leading new golf developments.

Independent Experts

- Matt Johns
- Alexandra Almeida
- Erich Steiner
- Mauricio Gonzalez
- Micah Woods
- Warrick Stewart

Core Partners

We work with a broad range of enlightened industry partners and suppliers who recognise the importance of sustainability to their businesses and the sport.

We provide a platform for the promotion of new product and service innovation, connectivity from like minded businesses and from businesses direct to an expanding base of consumers.

We will customise joint activation for golf sponsors seeking to forge a direct and credible link between their corporate responsibility and sports sponsorship objectives.



**More
than a
game**



 **GEO
Foundation**
Sustainability in and through golf

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