

Sustainability Summary

Hoiana Shores Golf Club, Vietnam

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"A key vision was to rehabilitate a landscape previously degraded by numerous other previous land uses. By establishing a rich and biodiverse habitat across the site, the increase in species diversity is significant and will provide long term environmental benefits and a positive natural legacy for the development. The project has created a distinctive and outstanding Vietnamese golfing experience, that reaches all facets of the project from the flora and fauna found on the golf course to the service and experience of the visitors throughout the property."

Hoiana Shores



Hoiana Shores Golf Club
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DEVELOPMENT

1

Executive Summary

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, had very few signs 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 layout that provides 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 native planting and well trained and welcoming staff team.



Project Description

The course is set with the unique South China Sea backdrop and the Cham Islands on the horizon. The course's low links like land allows panoramic views, and the deep sandy soils have allowed a course to be crafted and chiselled by man and nature into a rolling links style golf course. The project is part of the Hoiana Integrated Resort which includes hotels, retail and housing accommodation. The wider development is to be implemented over several phases currently scheduled to be completed by 2035.

The golf links are conceived as a 'championship' standard golf links capable of challenging all levels of player. The course consists of 3 'character zones' from dunes, to beach side to estuary holes. The style is typically open and expansive playing corridors for a links course, with flexible teeing grounds intended to integrate closely with the native dune landscape character. The course will be open all year round, walkable with green complexes designed to be fun and accessible for all players - further enhanced by the course setup length ranging from 5000 – 6700 metres.



"The golf links is visually wide and open with expansive panoramic views across much of the site. The native habitats weave through the site and connect the three landscape character zones of the golf course to their wider surrounds. This natural re-colonisation of the site provides a fluid landscape framework that flows with the restored site contours and golfing grounds."

Hoiana Shores Golf Club



“Over my visits to the Hoiana Shores Golf Course project, I’ve seen the site develop into a superb golf course, with restoration of and preservation of native coastal vegetation on the dunes, careful selection and care of grasses that can produce a high quality playing surface with minimal inputs, installation of an irrigation system that can be adjusted to apply the minimal amounts of water required, the provision of training to scores of local students, and the creation of hundreds of jobs.”

Micah Woods, Independent Verifier - Hoiana Shores

Key Achievements

Hoiana Shores creates a new sustainable golfing destination in Vietnam. It is a project embedded in its place, restoring the native landscape, supporting local communities with skills and jobs and celebrating the local crafts and artisan talents of the region. The key achievements of the project are summarised below under the appropriate sustainability headings.



- Rehabilitate 6 hectares of natural coastal dune landscape.
- Restore 23 hectares of degraded former fish farming lands back to native coastal scrub vegetation.
- Close visual integration of the golf course with the natural landscape character.
- Planting over 1,500 new native and locally sourced trees on site.
- Use of 100% native and locally sourced vegetation for all out of play areas.



- 100% use of on-site sands for construction.
- All rootzone sand used for green construction also obtained on-site.
- Irrigated area limited to 38 hectares.
- Grass selection of Tifeagle and Zeon to optimize playability while minimizing pesticide and fertilizer applications.
- On site nursery for grasses and landscape plants to reduce reliance on off-site contractors.



- Established a vocational training college with a 5-year commitment to train individuals who will be given preference in recruitment at Hoiana Shores.
- Provided opportunities for staff to have access to times to experience the golf course either as new players learning the game or out on the full 18-hole part of the facility.
- Golf course superintendent present throughout the development of the project.



"Huge credit here has to go to the teams involved - their vision creativity and positivity have meant that what has been created represents a truly authentic Vietnamese golfing experience. The site is now draped in thriving native habitats, with protected views of the off shore UNESCO World Biosphere Reserve and a world class golf course shaped by man and nature. Backed by careful and experienced management methods means this golf course and its wider environment remain respectful to the native setting and will create a memorable, genuine experience for golfers for years to come."

Sam Thomas - Director of Golf Development, GEO Foundation

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Design Stage

Overview

Key design considerations addressed by the project during the design stage included: the shifting coastal erosion patterns along the beach front; the re-profiling and restoration of a native dune landscape; the long term sustainability of the golf maintenance and overall staffing and operations; the careful management of bunker design and flexibility in overall design to adapt to the natural forces that will refine and shape sands; large scale on site nursery creation for turf and plants; adapt irrigation design to very site specific climatic challenges, wind conditions and soil profiles; establish a golf venue in an emerging golf market and aiming to encourage people and resort guests to experience the game for the first time at the property.

Goals:



Restore native dune vegetation and native landscape across the site from degraded former fish farms. This included native and locally sourced vegetation for non-irrigated out of play areas, minimized signage and unnecessary golf course accessories across the property.



The sand on site was used for construction with no need for imported sand material. The free-draining sandy soil allowed for minimal need for plastic drainage pipe. Irrigation was limited to playing corridors, with hard edges on the irrigation system to minimise overspray into the dunes.



The project set out to create jobs in construction, greenkeeping, caddying, and operations. The course itself was designed to be accessible with open and expansive playing corridors and approachable green complexes adapted to the ground game played at the historic links venues.



photo credit: Hoiana Shores

Activities

The following section outlines the process that went into designing Hoiana Shores to be a leading sustainable golf destination in South East Asia. It illustrates the commitment and careful consideration of the project team's objectives and vision throughout the early stages of the project's life.



Nature

From the outset, the project team were very conscious of the long-term sustainability of the golf links. Central to this is the quality of the golf course and the sustainability of its long-term care and management. Discussions at the earliest stage focused on the turfgrass selection, the maintenance machinery, facility and staff. The turf selection is Zeon Zoysia for the fairways, tees and surrounds and a TiffEagle Bermuda for the greens and surrounds. These turf grasses are best suited to the climate of Hoi An and require comparatively low levels of inputs, both chemical and water, for them to thrive.

The next key discussion revolved around landscape restoration of the degraded site and nature based solutions to the coastal

23 hectares of native dune scrub habitats and over 1,500 native trees and shrubs sourced

erosion issues at play. The whole site restoration needed a comprehensive and visionary approach to return the site to a more natural look and feel, which could cultivate the conditions for diverse and native dune habitat growth. This included native and locally sourced vegetation and informal bunker design were built with informal edges to integrate with the natural landscape.



photo credit: Hoiana Shores

Resources



Good site selection played a key role in being able to deliver a low input golf course. Deep, good quality sand on site meant significant resource savings and faster build times and earthworks. The drainage was able to be kept to a minimum with short drain runs and catch basins reducing plastic pipe. Early on, a quick understanding was gained for the micro climates across the whole site using weather stations and local knowledge - highly localized irrigation management plans were drawn up.

Grass selection was made early also, with a low input and high performance breed - *zeon zoyisa* - selected for the turfgrass surfaces. This early selection meant large turf farms were

**Zero
imported
sand
material
needed for
golf build**



"The original landscape we worked with was a mixture of abandoned shrimp farm lakes, invasive plant species, and widespread dumping grounds. One of the more unknown parts of the design process was transforming and restoring these areas back into a native dunes land. We pride ourselves with the creation of a seaside landscape that now looks like it's been around for ages. This project was a labor of love for us and the passions of all involved in the construction process is evident in the final product.."

Bruce Charlton, ASGCA - Principle of Robert Trent Jones II

set up where future villas were to be built in later phases - providing readily accessible local turf and a first hand look at how it would grow in and perform.



Community

The local culture and heritage were special assets to the team in the design phase. The creation of jobs, skills and access to the facility were all discussed at length in the design phase. There was a clear understanding that creating an authentic Vietnamese experience also came from the people and staff at Hoiana.

The desire to improve quality of life for staff, improve working conditions and staff benefits as well as providing opportunity for career progression were also an integral part of the leadership team's thinking.

>1,500
plants grown
and over 5 ha.
of turf in the
on-site nursery



photo credit: GEO Foundation



two
large on-site
turf farms
and one
plant nursery

Design



"The Hoiana Shores golf course represents real leadership and commitment in the field of sustainable golf for this part of the world. Now already established as a highly regarded facility in this part of Vietnam, there is a significant opportunity for Hoiana Shores to contribute to long-term industry learning, local business development, tourism revenue and government relations. Many of these benefits are delivered through the whole team's careful planning and perseverance to stick to their strong vision for the site throughout the design and construction process."

Micah Woods, Independent Verifier - Hoiana Shores

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Construction Stage

Overview

Construction work on the golf course started in October 2017. Key focus areas of the work were around the successful creation of the large reservoir body that adjoins the adjacent hotel site. The integration of the coastal erosion protection ensures the integrity of the site coastal edge during the storm season. Extensive investigative work was done on the design and construction of the coastal edge and the storm overflow from the reservoir.

Local plants were assessed for their ability to support the coastal erosion works and specialist plant equipment was needed to complete the installation. The construction work was carried out by Linkshape, who also took responsibility for the grow-in phase of the work. The golf course is set to open in 2021 due to delays generated by the COVID-19 pandemic.

Throughout the construction process there was close collaboration with the design team. The site conditions meant small changes and tweaks to the design were more easily possible throughout the construction work. The construction teams saw things shaped and blown and shaped and blown again by the forces of nature at work. This 'refinement' of designs and the nimble approach to construction led to continual improvement to the shaping and landscape and reductions in drainage infrastructure and turfgrass area. More than 1,500 trees were planted and extensive wetland plants were propagated and planted up throughout all margins of water bodies on the course.

**native
landscape
roughs
planted over
44 Hectares**

Construction





Activities

The following section outlines the construction process of Hoiana Shores. It illustrates the steps taken during construction to deliver the highest quality golf course in a responsible, practical and resourceful way.



Nature

The flexibility and continual review of the golf course during construction by the architect and construction team helped to refine the designs to reduce turfgrass, and increase native habitat areas. It involved close collaboration on native dunes planting and the successful propagation of a large on-site nursery.

Work went into testing and trialling the most suitable and sustainable cart path materials that would visually integrate but also withstand the severe weather conditions possible in this part of Vietnam. During construction the influx of native fauna was notable as native landscape became established and the addition of a small turf farm and training area of staff at the maintenance facility were good additions to the property's assets.

Resources



Reuse and salvaging local materials washed up in the tide and found during clearing and earthwork were stockpiled by the superintendent and crafted by local trades into course furniture, dwarf walls, signage, tee markers and bag stands among other things across the course and academy. 100% electric golf carts were procured for

future use at the property an extensive irrigation audit went on throughout to adapt the system to cope with the varying weather conditions and reduce over spray of any water in the native dunes area. Control of exotic species by hand pulling was prevalent, but the low nutrient nature of the soil seemed to result in fewer exotics taking hold than first feared. The ability to reuse all on site sand was realized and extensive soil testing was done at certified laboratories to ensure optimal rootzone performance. Zeolites were added to the greens construction only and fairway/tee remained 100% native soils with no drainage gravels.



Community

The construction teams were made up of more than 90% of workers from the local region of Vietnam - many coming from the local villages to support the construction workforce.

A significant investment during construction time was made into the establishment of a vocational training college accredited by the Quang Nam College of Art, Culture, & Tourism and Melbourne Polytechnic, with a 5 year commitment to train individuals who will be given preference in recruitment at Hoiana Shores come opening time. The college was run by the greens and hotel staff at Hoiana and will lead to upskill in the local jobs market and increased job retention is anticipated with lower staff turnover a goal. It is hoped that the improved staff benefits will increase the connection between the local community and the course with the potential to allow limited access for staff to a relatively new sport in Vietnam and engender a sense of ownership and pride in the construction achievements.

**100%
removal of
exotics and
invasive
species**

**One
service
industry
training
college
established**

Construction





photo credit: Hoiana Shores



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"As the first GEO Certified® Development in Asia-Pacific, the whole team's approach to building in sustainability at Hoiana Shores has been visionary and innovative. From the start, there was a clear commitment and desire to protect and enhance this special natural environment, as well as the deep rooted culture and heritage that is so evident in this part of Vietnam - it was exceptional. In a growing golf market, the team at Hoiana saw an opportunity to do things differently and create a golf development that was bespoke, responsive and authentic to the place. We at GEO are delighted to congratulate them on their achievement and look forward to their future successes."

Jonathan Smith, Executive Director at GEO Foundation





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DEVELOPMENT



photo credit: Hoiana Shores



GEO
Foundation
for Sustainable Golf

+44 (0) 1620 895 100
hello@sustainable.golf
sustainable.golf