

Sustainability Blueprint V1

FALESIA D'EL REY, ÓBIDOS

Design Stage

OnCourse® - Developments

Milestone Document

Produced by:Golf Environment Organization

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1. INTRODUCTION AND OVERVIEW

PURPOSE OF THE REPORT

This Sustainability Blueprint V1 has been prepared by GEO in order to present a concise summary of the anticipated sustainability outcomes generated by the project. It aims to outline the practical ways in which this golf development will benefit local communities, individuals, and the environment.

It provides a comprehensive understanding of the sustainability vision and goals for Falésia D'el Rey. It outlines a roadmap showing how these will be translated into real world deliverables in the subsequent stages of the project.

The V1 Blueprint forms the second of four milestone reports, prepared for Falésia D'el Rey on the pathway to receiving full GEO Certified® - Development status.

OnCourse® - DEVELOPMENTS

The OnCourse® - Developments program aims to showcase the world's most sustainable golf developments. It gives recognition to projects which demonstrate leadership from local through to global level in all three pillars of sustainability; environment, society, and economy.

The project verifiers reviews the project at key milestones corresponding to the following stages of development:

1. Design
2. Construction
3. Completion

Falésia D'el Rey formally enrolled in the OnCourse® - Developments program on May 2016.

PROJECT DESCRIPTION

The project has been 14 years in the design stage, which has been led by Dye Designs. It is a key component in the wider strategic development of the Oeste region to primarily boost the economy and increase tourist numbers.

The site is located adjacent to the Lagoa de Óbidos and the Atlantic ocean bounding the site in the West. The site has long distance views towards the coastline with framed views enclosed by the natural rolling topography and vegetation. The landscape is characterized by low coastal scrub and the proximity to the ocean.

The property is 230 hectares with the golf course itself covering approximately 27 hectares. The site coordinates are 39°24'58.65"N, 9°14'29.90"W. The project components include:

- 18-hole golf course
- Driving range and practice area
- Clubhouse¹
- Maintenance facility
- Restrooms on the golf course

The future environmental management of the golf course and surrounding landscape is a focus of the project team. Responsible construction techniques and future monitoring and maintenance practices will contribute towards a long-term efficient golf course model.

DESIGN STATEMENT

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.²

Cynthia Dye, Dye Design Group

The approach to the design and construction of the golf course is carefully planned and will integrate the native landscape throughout. The colors and textures of the site that bring a unique character to this area have been allowed to flourish under the measured tree removal

¹The level of consideration given to built elements listed is limited to the external skin outwards into the landscape and their placement within the landscape.

²Extract from Architect's Environmental Design Statement

works. These removal works have 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 style of feel of the golf course and the masterplan layout will create a pure golf experience. The minimal earthworks and utilization of natural drainage swales and gullies means the course flows naturally with its surrounds. This minimal approach fits well into a short construction window planned and the native sandy soils across the site will assist in reducing time and fuel used in the shaping process.

The result will be 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.

2.VISION AND GOALS

VISION

Express a close relationship between the golf links and the native coastal environment of Óbidos region. The qualities of this coastal environment and a celebration of the local way of life will be what makes Falésia D’el Rey so special.

GOALS

NATURE

Restore a previous plantation landscape into a mosaic of native coastal scrub and diverse habitats.

RESOURCE

Maximise existing site features and materials to create an efficient golf course model that sits lightly in its location.

COMMUNITY

Provide opportunities for local expertise, suppliers and workforce to contribute to a genuinely Portuguese golf links

3. ROADMAP

THEME	GOAL	PROJECT TARGETS	TASKS UNDERTAKEN / TASKS PENDING
NATURE	Restore a previous plantation landscape into a mosaic of native coastal scrub and diverse habitats.	Increase in the habitat diversity on site, including: <ul style="list-style-type: none"> - 51,386m² of coastal scrub - 29,178m² of aquatic habitat - 3,359 linear metres of wetland marginal habitat - 5,678m² of retention basin wet/dry habitat - 36,061m² removal of plantation trees 	Master Plan – Incl. scrubland mix and areas; wetland and stream areas; retention basins; water features; Clearing Plan
		Visually sensitive design and placement of built element	Clubhouse Plan
		Minimize visual impact of clubhouse with: <ul style="list-style-type: none"> - Low profile design - Natural cladding materials 	Clubhouse Plan and Elevations
		Minimize the disruption to existing established vegetation	Clearing plan
		Minimize soil erosion and conserve in-situ subsoil	Soil Erosion Monitoring + Mitigation
		Analyse and conserve the existing natural drainage channels to inform drain locations	Drainage Design – Incl. Contour plan
		Water bodies placed in natural low points or existing drainage gullies and act as a storm water management during periods of heavy precipitation	Grading Plan

		A close visual relationship between the golf course style and the native landscape surrounds	Golf Architect's Design Statement
		A flexible approach to bunker design, utilizing open existing sand areas for placement and informal edging to blend with dune character	Confirmation Statement
		Using materials from the site for a permeable cart path surfaces to minimize their visual impact	Cart Path Plan
		Naturalized edges of water bodies with wetland buffer	Confirmation Statement including photograph of sample section
		Maintenance facility demonstrating best practice pollution control measures	Maintenance Facility Plans
		A responsible approach to habitat management to continually monitor and removal invasive or exotics species	Scrub Management Statement
		A comprehensive monitoring plan during construction and on into operations of all flora, fauna, habitats and water quality	OnCourse® - Facilities plan / Monitoring Plan

RESOURCES	Maximise existing site features and materials to create an efficient golf course model that sits lightly in its location.	Golf course automated irrigated area limited to 26 Ha. / 11% of overall site area (230 Ha.).	Irrigation Design – Incl. area to be irrigated with automated equipment Golf Masterplan
		Restrict intensively managed turf to 26 Ha.	Golf Masterplan – Incl. grass typologies
		Drainage system is closed loop and feeds 100% of surface water captured from course drainage into water bodies before being used for irrigation	Drainage Plan
		Irrigation water has three tiers of sourcing depending on climatic conditions: <ul style="list-style-type: none"> - Captured surface drainage including Royal Óbidos GC outflow - Borehole extraction from 3 points - 25% from local municipality TSE source 	Irrigation Plan Confirmation Statement
		Water bodies designed to capture the storm water design levels	Cut and Fill Plan
		Low input fescue grass species mix selected for tees, fairways, roughs	Grass Selection Statement – Incl. Grass Species Mixes
		50,000 m ³ / 100% of sand and topsoil for use on fairways tees and surrounds has been sourced on site	Soil Survey Cut and Fill Plan
3,700 m ³ / 8% of overall rootzone has been sourced from local sand quarry 30km from site	Confirmation Statement		

	<p>A best-in-class irrigation system Incl.:</p> <ul style="list-style-type: none"> - Fully adjustable 330 degree low flow irrigation heads using latest available technology. - Individual head controls on greens and specialist areas - Dual head controls everywhere else - Split pressure delivery to maximise efficiency - Soil moisture sensors (TBC) - Heads layout calibrated to prioritize central core of the golf hole by maintaining correct head-to-head distances there at the expense of the hole's fringe and reducing number of irrigation heads where possible 	<p>Irrigation Specification Confirmation Statement</p>
	<p>Minimize the amount of fertilizer, pesticide and herbicide application</p>	<p>OnCourse® - Facilities plan / Course management plan</p>
	<p>Clubhouse to achieve 'Level A' through LiderA's sustainability certification system</p>	<p>Confirmation statement</p>
	<p>Use of certified timber on clubhouse cladding</p>	<p>Confirmation statement</p>
	<p>Integration of solar panels on all buildings</p>	<p>Confirmation statement</p>
	<p>100% permeable paving on all 100 car park spaces</p>	<p>Clubhouse Plan Confirmation Statement</p>
	<p>Maintenance equipment and furniture sharing relationship with Praia D'el Rey</p>	<p>Confirmation statement</p>
	<p>Staff resource sharing relationship with Praia D'el Rey to reduce labour time and cope with increased workloads on either course</p>	<p>Confirmation statement</p>

	No duplication of core operational needs such as office space and managerial staff	Clubhouse Building Plan
	Centrally located maintenance facility reducing fuel use and improving logistics	Maintenance Building Plan
	100% (40 N ^o) electric golf buggies	Vehicle Schedule
	Part of the maintenance fleet to Hybrid vehicles	Vehicle Schedule
	Efficient drainage design with minimal plastic piping by utilizing natural low points and catch basin approach versus tile drains	Drainage Design
	Restrict earthworks to approximately 220,000 m ³ with zero export of material	Cut and Fill Plan
	Create on-site plant nursery for turf and other species to reduce reliance on external sourcing	Confirmation Statement
	Full waste stream separation on golf course during construction and into operations	Drainage Design

COMMUNITES	Provide opportunities for local expertise to contribute to a genuinely Portuguese golf links	Local Contractor team preferred.	Contractor details
		Increase in local jobs market: <ul style="list-style-type: none"> - 24 jobs in operations of facility - 15 green keeping staff - 4 seasonal green keeping staff - approximately 50 construction staff 	Confirmation statement
		100% Portuguese companies and suppliers used in the construction project	Confirmation statement
		Public access route to the beach to be open during construction	Confirmation statement
		Promote an accessible form of golf including: <ul style="list-style-type: none"> - Multiple tee locations - Promotes the ground game - Inclusive ethos with generic tee descriptions and offering 6,400m to 4,500m courses 	Golf Director Statement
		Pro-active junior golf program linked to national “Project Drive” and “Golf for All” initiatives	Confirmation statement
		Local superintendent preferred and present during construction	Superintendent details
		Open ethos to the project and property with access to all facilities available to public and cycleways connecting across the area	Confirmation statement

	Promotion of more than golf offering including Oceanside living, walking and cycling trails, access to the lagoon and birdwatching	Golf Director Statement
	Partnering with local Óbidos schools and colleges to promote outdoor learning and provide internship opportunities for aspects of the golf business	Confirmation statement
	Promotion of local services, clubhouse provisions including food and drinks	Golf Director Statement
	Knowledge sharing of the practices implemented across the golf community - especially through close links with the Portuguese Greenkeepers Association as a showcase projects of responsible best practice in golf course management of relatively unused turfgrass species	Confirmation statement
	Strictly controlled site access times for workers and heavy haulage vehicles	Confirmation statement Photograph

4. VERIFICATION CONCLUSION

Following an accompanied site inspection carried out on 24th and 25th May 2016, I have reviewed the Sustainability Blueprint above in conjunction with the supporting information and recommend that Falesia D'el Rey, Obidos, should progress to the Construction stage of the OnCourse® - Developments program.



Alexandra Betâmio de Almeida