

Project Appraisal

Falesia D'el Rey,

Óbidos

Preparation Stage

OnCourse® Developments

Milestone Document

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FOREWORD

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. Resources 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 honor the natural environment.

1. RECOMMENDATION

The Recommendation of GEO further to the Project Appraisal process outlined by this report is that **Falesia D'el Rey**, Óbidos should be formally enrolled in the OnCourse® Developments Programme.

The primary reasons for this recommendation are:

- A comprehensive approach to the overall environmental management of the golf course in construction and future operations
- A sensitive routing and modest footprint that is integrated into the native landscape planting
- A resourceful approach to water management across the site, maximising the use of recycled water sources generated in the adjacent properties
- An accessible design that includes progressive tee complexes to encourage a playable golf course for new players of the sport

Taking into account to site conditions and the sensitive design approach I am confident that given the high standard of sustainable development that commitment to the OnCourse® Developments Programme demands, **Falesia D'el Rey** undoubtedly has the potential to deliver significant multiplier benefits in strengthening the environment, society and economy of the the OesteCIM region.

GOLF ENVIRONMENT ORGANIZATION

March 2016

2. INTRODUCTION

PURPOSE OF REPORT

The purpose of this Project Appraisal Report is to provide a recommendation regarding formal enrolment in the OnCourse® Developments programme.

The recommendation is informed by a review of the fundamental sustainability opportunities and challenges the project is likely to generate, to ensure that it has the potential to deliver the very highest standards in sustainable development.

CLASSIFICATION

Falesia D'el Rey has been classified as falling within the category **Medium Complexity** for the purposes of the OnCourse® Developments programme.

SCOPE OF PROGRAMME

It is regarded as fundamental to the aims of the OnCourse® Developments programme that the project has the potential to deliver a fully integrated sustainability concept, in which golf is embodied within a wider entity. In this instance it is proposed that the OnCourse® Developments programme should include development of the golf course facilities at **Falesia D'el Rey** including:

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

Moreover, the OnCourse® Developments programme philosophy requires that the sustainability potential of the project extends beyond the property boundary, to interface with, and embrace, the wider social, economic and environmental context of the Obidos municipality and wider OesteCIM region.

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

METHODOLOGY

Project Appraisal constitutes an initial review of the core aspects of the development project. Should the project be formally enrolled in the OnCourse® Developments programme, this process will be extended incrementally to explore the relevant sustainability issues at progressively more detailed levels, corresponding to the following stages of development:

- Design
- Construction
- Certification

The Project Appraisal therefore focuses on investigating the broad compatibility of the project with GEO values and aims, rather than detailed specifics. It includes the following key tasks:

- Review of the main components of the project as currently defined
- Appraisal of key sustainability issues generated by the project, in order to identify and understand the main opportunities and challenges in relation to the Sustainable Golf Developments Guidelines and Voluntary Sustainability Standard
- Advice and guidance on fulfilling the project's sustainability potential through the subsequent stages of the process

These tasks have been informed by:

- Review of documents provided by the project team directly
- A detailed review of general literature sources, site photographs and websites
- Discussions with the project team

3. CONTEXT

INTRODUCTION

The purpose of this section of the report is to provide a brief overview of the context of the project with respect to the main factors potentially influencing sustainability. It is presented in two parts, addressing first the wider context of Obidos and the OesteCIM region, followed by a more detailed description of the project site. The site information is drawn primarily from the baseline study undertaken for the project.

NATIONAL AND REGIONAL CONTEXT

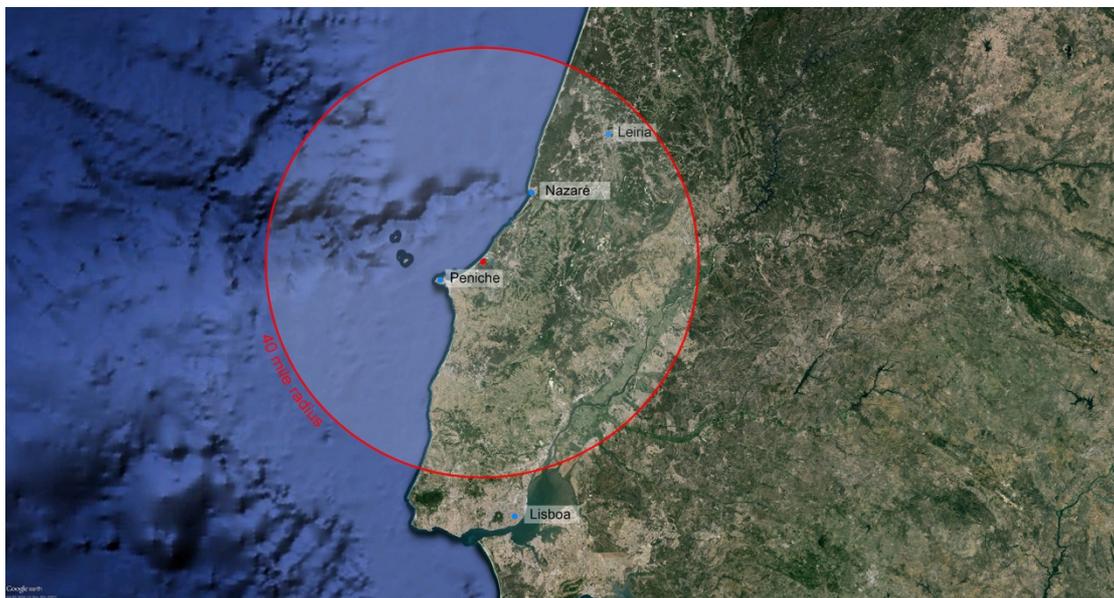


Figure 1: Context Map (Source: Google Earth)

1. Socio Economic

- a) The region of OesteCIM covers an area of 2,200km², with a population of around 362,540 with a population density of 165/km². The population centers are clustered around the towns and villages with large areas (87%) of rural and agricultural land.
- b) There are 33 golf courses³ in the Lisbon and central region with the majority of those focused around the Lisbon municipality area.
- c) The main economic activities in the region are trade, hotels and restaurants, transport and communications related (25% of GVA) with agriculture particularly fruit and vegetable production being proportionally much higher than other parts of Portugal⁴.

² http://www.qualitycoast.info/?page_id=345

³ <http://portal.fpg.pt/web/guest/campos>

a) ⁴ <http://www.oestecim.pt/custompages/showpage.aspx?pageid=d46d0f49-1202-4507-869e-3606a80550e5&m=b67>

2. Environment

- a) The predominant landscape of OesteCIM is agricultural land on the interior with spectacular dunes and valuable coastal habitat along the Atlantic coastline.
- b) Environmental designation in the region include the SCI area of Peniche / St^a Cruz, part of the NATURA 2000 network with valuable coastal habitats and several endemic species. There are several nature reserves in the region including Serras de Aire e Candeeiros, Paul da Tornada and Berlengas some 10-15km of the coast.
- c) The climate of the region is Subtropical-Mediterranean with an annual mean temperature of 17.5°C and average precipitation of 774mm with the the majority falling between October – February⁵.

PROJECT SITE



Figure 2: Site Map (Source: Google Earth)

1. General

- a) The site is 230 hectares in total located on the Atlantic coastline adjacent to the Lago de Óbidos.
- b) The site has long distance views out across the Atlantic, occasionally enclosed by the rolling topography of the site. The key landscape feature of the site is the coastline and dramatic dune landscape. The site contains a significant quantity of pine tree plantation.

⁵ http://www.weather.gov.hk/wxinfo/climat/world/eng/europe/sp_po/lisbon_e.htm



Figure 3: Site Photograph (Source: Project Team Lead)

2. Topography and Drainage

- a) The soil on the site is mostly sandy free draining soil.
- b) The topography is gently undulating generally sloping towards the coastline. There are numerous small scale hollows and rises that provide excellent terrain for golf.
- c) There are no significant existing water bodies on the site.

3. Vegetation

- a) The vegetation on site is pine and eucalyptus trees with low coastal scrub community. The coastal scrub is typically made up of species such as juniper, *Ulex densus*, clary sage, sea holly⁶.
- b) There are cleared areas on site that were previously pine and eucalyptus plantations.

⁶ The coastal vegetation of the Portuguese Divisory Sector: Dunes, cliffs and low-scrub communities. Finisterra 35(69): 69–93, Pedro Arsenio. 2000.

4. PROJECT APPROACH

The project is part of the wider Falesia D'el Rey resort development. The wider development has been considered a “Nationally Important Project” (NIP) in Portugal and contributes significantly towards the economic and tourist offering of the OesteCIM Region. The approach to the resort has been to integrate sustainability into the heart of the resort and its designs. The resort real estate is a low density layout with integration of native vegetation throughout the resort landscape.

The golf course is carefully routed to maximise the existing topography and landscape features resulting in minimal disturbance to the existing vegetation. There will be landscape restoration and improvement works carried out to the existing habitat conditions under the guidance of the local authorities. The works will include the removal of exotic or invasive plants found in the area such as acacia spp. and cape fig (*Carprbrotus edulis*).



Figure 4: Golf Course Routing (Source: Project Team Lead)

VISION

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.⁷

Cynthia Dye, Dye Design Group

CLUBHOUSE

The clubhouse is set to receive Level A classification from LiderA⁸ sustainable construction system for its environmentally sensitive design.



Figure 5: Illustration of Clubhouse Design (Source: <http://www.suakay.com/>)

PROJECT TEAM

Client:	Priority Goal
Project Manager:	Paulo Monteiro, Marriott
Golf Course Architect:	Cynthia Dye, Dye Designs Group
Golf Director:	Francisco Tavares Cadete, Golfbéltico, SA
Superintendent:	Pedro Rebelo
Construction Manager:	Ficope
Contractor:	ProGolf

⁷ Extract from Architect's Environmental Design Statement

⁸ <http://www.lidera.info/>

PROJECT COMPONENTS

The Falesia D'el Rey golf course and practice facility covers less than 30 hectares (approx.. 20hectare of maintained turfgrass) of the 230 hectare site. As summarised above, the additional components include:

- 18-hole golf course
- Driving range and practice area
- Clubhouse⁹
- Maintenance facility
- Restrooms on the golf course

TIMESCALE

The golf construction work is expected to commence in May 2016 with opening expected mid 2017. Initial site clearance work relating to enabling works has begun on site at time of writing.

⁹ The level of consideration given to built elements listed is limited to the external skin outwards into the landscape and their placement within the landscape.

5. APPRAISAL CHECKLIST

AREA	OPPORTUNITY	CHALLENGE
SITE SELECTION	<ol style="list-style-type: none"> 1. A site with excellent existing terrain suited for golf 2. Good quality groundwater supply 3. Existing soil is sandy and free draining 4. The principle of having a golf course development on the land has been approved by the local authority 5. The development is seen as a positive addition to the existing recreational opportunities in the region 	<ol style="list-style-type: none"> 1. Limited availability of water 2. Significant protection of habitats and individual species exists on site 3. A comprehensive environmental monitoring programme has been requested as part of the planning conditions 4. Soil survey information is yet to be made available

NATURE	<ol style="list-style-type: none"> 1. Promotion of a common sense approach to the future management of the golf course in terms of fertilizer and pesticide applications and water use 2. Detailed surveys of existing topography, hydrology and soils have been carried out 3. A minimal intervention on the existing landscape through careful routing and design of the golf course 4. There is a clear desire to integrate the course layout into the native habitats, using existing native plants from the site to tie into the existing landscape character 5. Less than 25 hectares of the property is proposed as 'intensively managed grass' i.e. fairways, greens and tees 6. Extensive studies have been done to minimize the risk of soil erosion and ensure adequate provisions and practices are in place 7. Through working with the competent authority adequate pollution prevention provisions have been conditioned regarding storage of fuels and chemicals as well and the applications on the golf course 8. Turfgrass filters around all proposed water features were conditioned as part of the permitting process. 	<ol style="list-style-type: none"> 1. Flood risk unknown to GEO at this time 2. Explore the use of locally sourced materials for construction of associated golf elements such as footpaths, drainage gravel, soil ameliorants and bunker sand
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RESOURCES	<ol style="list-style-type: none"> 1. The routing and modest footprint of the course has meant proposed earthworks have been kept to a minimum 2. Areas of intensively managed turf are kept to a moderate size dictated by the minimal intervention approach to the design process, therefore reducing fuel use in maintenance 3. Clubhouse is sensitively located to provide good views over golf course but not being placed on the highest point of the site 4. Extensive investigations have been carried out into water sourcing for irrigation to favor recycled water as the primary irrigation water source 5. A 'best-in-class' irrigation system has been conditioned as part of the permitting process 6. Clubhouse has been classified 'Level A' by LiderA sustainability system in association with University of Lisbon. 	<ol style="list-style-type: none"> 1. USGA greens construction method places premium on sourcing exact greens construction material 2. Energy strategy for core golf buildings is yet to be made available 3. Grass species selection process has yet to be made available 4. 15cm of sand capping is proposed across the tees, fairways, roughs, bunkers and waster bunkers – clear justification statement and agronomic report needed
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COMMUNITY	<ol style="list-style-type: none"> 1. Local golf contractor has been selected for the execution of the golf construction works 2. Leadership of project team is strong with full understanding of sustainability and golf 3. A level of public access will be maintained during construction and into long-term 4. Carefully considered traffic management in consultation with local authority will minimize impact of traffic on local residents both during construction and future operations 5. Multiple and progressive tee complexes creates a more accessible form of the game 6. Extensive community engagement events were carried out during the permitting process in 2009 7. Archaeological survey have shown there to be no evidence of archaeological interest. It is planned for there to be archaeologist and paleontologist on site during construction works 	<ol style="list-style-type: none"> 1. Currently no details on education and outdoor learning opportunities proposed 2. Consideration of inclusion of 'non golf activities' are yet to be made available
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6. GUIDANCE AND ADVISORY

The key theme to be communicated with regard to ongoing advice and guidance on this project is simple and clear: continuing commitment to the highest standards of sustainable development.

The challenge and opportunity lies in following delivery of early stage planning, with increasingly detailed design and construction stages. True success in this will be dependent on maintaining close attention to detail consistently across all sustainability themes, under the pressures associated with a very demanding timescale.

Specific design development issues where GEO will seek to provide continuing inputs in subsequent stages include (those already discussed above). In addition, points worthy of further close attention include:

- Irrigation Water Sources
- Soil Erosion Management
- Agronomic Report – specifically:
 - Grass Species Selection
 - Existing Soil Condition
 - Rootzone Designs
- Environmental Monitoring Plan
- Community Benefits – specifically:
 - Environmental Education e.g. Eco-Escolas partnering
 - 'non-golf' activities provision

7. NEXT STEPS

- Agreement of formal registration of project in the GEO OnCourse® Developments programme
- Arrange site visit by independent verifier
- Preparation of project's Sustainability Blueprint V1 (SBPv1) with the support of GEO
- Evaluation of completed Sustainability Blueprint V1 by the independent verifier

Limitations

The content of the Project Appraisal is drawn from information contained within exiting project documentation and surveys carried out by consultants hired by Priority Goal. It reflects information correct at the time of writing, it is possible that new information will become available after the completion of this report. This new information would be incorporated into future revisions of this report or in the subsequent stages of the certification reporting.



OnCourse®
Developments

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