

GEO Certified® Independent Verification Report



Golf Facility: Le Golf National
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Executive Summary

Le Golf National is located in Ile-de-France, and limits in the south west and south east frontier with Magny-les-Hameaux and Châteaufort respectively, which form part of the Haute Vallée de Chevreuse Regional Natural Park. Climate is moderate with oceanic influences and alternance of cold & warm seasons. West winds are predominant and average temperature is 10.7 °C (average minimum 6.4 °C, average maximum 15.2°C). Average annual precipitation is 695 mm, and rainfall is regular through the year (42 – 55 mm/month).

The land covers a surface of 139 has at 160 meters above sea level, and has 3 golf courses: the Albatros, the Aigle and the Oiselet. Designed by the architect Hubert Chesneau, the golf Course opened its gates in 1.990 after 3 years of work and is characterized for its links design and its stadium topography to host spectators during golf events. The landscaping of the site has changed dramatically from an agricultural landscape to urban, with a dynamic housing development, which started in 1990. Le Golf National represents a matrix where natural, urban and industrial zones converge. The resort limits with The Royal Port forest, the green belt de Saint-Quentin-en-Yvelines. The European net Natura 2000 includes 2 zones closer than 5 km to Le Golf National: the Massif de Rambouillet and the Parc naturel régional de la Haute Vallée de Chevreuse. Because of this, Le Golf National is within a particularly rich ecological context. Additionally, it is a potential dispersion zone for many vegetable & animal species.

This year will host the 42nd edition of the Ryder Cup and will aim to host a challenging event for players and a show for on course spectators and around the globe. All these while promoting the game of golf in France as well as emphasize the values it channel.

Nature

Le Golf National is situated within a transition zone between urban, agricultural and forest land. This fact makes the golf course a place where many species coming from the forest and the agricultural zones can find a either a transitional habitat for occasional dispersion or a permanent one for other species with less mobility or more specialized.

With the aim of preserving biodiversity, in addition to greater pressure in the natural spaces, and also in order to provide with site ecology essential knowledge to the golf course managers, the French Golf Federation and the Natural History Museum (NHM) have developed a program for studying biodiversity in French golf courses. Thus, fauna, flora and habitat have been evaluated at LGN in order to contribute to

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the conservation of Nature. A diagnostic standardized protocol for evaluating the habitats, fauna and flora has been put in place: Quality Ecologic Indicators (QEI). The QEI reflects the ecological quality of the golf course and is based on 3 criteria: diversity, patrimonial, functionality.



Thus, within the scope of work of the NHM, many vegetation & animal species of outstanding interest have been identified. Additionally, Le Golf National has responsibility with the preservation of a protected species at European level, the Martin Pecheur (*Alcedo atthis*), which nests at the golf course. Many endemic cricket species patrimonial in the region can be found on the course meadows; as well as butterflies, amphibia, dragonflies and mammals. More than 350 animals & vegetation species were observed through 2016. A rating of 70 / 100 was reached for the QEI. Of the 350 species, 13 of them are considered French autochthonous. The ecological richness is mainly explained to the diversity of natural and semi natural habitats. Other facts are:

- There are 10 EUNIS habitats in the land, including forest, wetlands, mineral landscapes, meadows, water surfaces, etc. The habitats are interconnected between them by the site perimeter
- 3 remarkable patrimonial habitats were identified: i) *Quercus*, *Fraxinus* and *Carpinus betulus* forest upon mesotrophic eutrophic to soils; ii) Helophitic reeds surrounding water bodies; and iii) riparian willows
- 8 micro habitats were identified (hibernaculums for amphibia, rock walls, beehives, bird nests & dead trees and branches, etc.). For instance, there are 10 nests differing in size in order to host different species of bats, little birds, etc
- 70 bird species were identified
- 13 species were identified as “patrimonials”, with the bird Martin Pecheur included in the European red list; the amphibia Triton Ponctué included in the French red list and other species (flowers, butterflies, crickets, etc.) in the regional red list

Today, and after the inventory and the report writing, both the NHM and LGN work in order to preserve the existing biodiversity of the course; they also encourage third parties (neighbouring third parties) to establish and find an ecological corridor in an area that consists of a growing industrial, urban & agricultural environment. Additionally, LGN follows the guidance given by the “Atlas de la flore sauvage” published by the NHM for deciding which autochthonous species will be planted annually in native areas.

The following observations regarding the previous certification in 2015 were made during the visit:

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- Bees and birds are still being monitored
- Lichens were still being noted by the maintenance staff
- Thanks to the previous increase of habitat patches, the bee hives corridors were maintained
- The old oaks at the 13th and 14th holes, Marteins Gate, stone bridges and Lys stines are still being carefully preserved

In the last 3 years, LGN has evolved towards a more natural and sustainable golf course, with an impressive stadium design. The greens show excellent conditions in terms of speed, firmness, smoothness and trueness with a natural mixture of grasses (Poa & Agrostis). On its side, the now mowed areas of the roughs have grown significantly, which endures and make playing conditions harder but also provides a more natural landscape established with a mix of grass species. Thus, outstanding conditions are achieved thanks to the established sward of bluegrasses, fescues and ryegrasses but also to the new designed non-mowed area, which have changed not only the challenge of playing the course but also its ecological role as habitat for the remarkable number of species living in the course.

- Rather than aiming to achieve a 100% Agrostis greens, LGN has been positive on having 50% local Poa grass and 50% Agrostis, which is considered a more sustainable option than a straight monoculture
- The significant reduction of maintained turfed areas has been carried out
- Areas with buffer strips around water streams and pond could be identified
- Non-mowed areas have been left surrounding ecological habitats and water bodies, and they are kept as buffer zones / no-spray areas
- The service for waste management has been externalized. Hazardous materials are separated and storage separately and safely until it's picked for being transported to external waste areas. Periodically, polluted material such as filters, batteries, wheels, solvents, etc. are picked up by an external company and transported to safe and separated places out of the property
- The use of UCV (mobile lightning) and Trichoderma harzanium is being tested in order to find new strategies for biological control of diseases; thus reducing potentially the use of pesticides.
- Pollution prevention strategy at the maintenance facility and the golf course remains of a very high standard. Examples of good practice being carried out are:

- Hazardous equipment and products are kept covered and there are sand based and sawdust absorbents in different places

- Responsible and smart greenkeeping practices such as controlled release and foliar fertilizing to avoid excess nutrient and leaching

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- Implementation of buffer strips

Resources

LGN has developed an outstanding project towards water conservation and irrigation efficiency.

The new irrigation project allows not to irrigate the out-of-play roughs, which has evolved to a mix of natural fescues. Sprinklers have been turned off in those zones, allowing a reduction of the irrigated area of 16ha (20% of total irrigated acreage). Autochthonous species which use less water have been replanted on the amenity spaces at the clubhouse and hotel; and in the bushes / massifs as well. Species like stipas, roses, buxus, euphorbias or callum are examples of this. Mulch beds are used as well in order to reduce evaporation for soil. Thus, water conservation is a fact, and furthermore a new water reservoir with 11,800 m³ capacity was constructed during 2016 winter, recycling the water coming from holes 3 and 13 and saving it in hole 14.

Besides, efficiency has been achieved thanks to individual sprinkler control, quick coupler valves for hand-watering where needed and double control in greens (sprinklers greens in & out). This allows precise, efficient irrigation. Sprinkler and nozzle technology has also allowed an improvement of a 26% in the Distribution Uniformity on the application of water. This leads to water savings of 50,000 m³ every year, thanks to a more uniform application of the water with less wet & dry spots. The greenkeeping daily management of water also sums in order to irrigate precisely: moisture content is measured daily in greens, fairways and tees with the help of TDR moisture sensors, and organic surfactants are used in order to improve water infiltration and soil moisture retention.

The following observations regarding the previous certification in 2015 were made during the visit:

- Completion of the construction of the water reservoir and installation of new drainage that will recycle water while maintain a good quality of the playing areas
- The renovation of the irrigation system of the Albatross course has been carried out.

The situation regarding energy management strategy at LGN continues to be the same, with the difference that electricity bills have dramatically increased due to the Ryder Cup preparations and the housing and infrastructure that go with it. Energy sourcing and consumption is an area in general that the club could make a significant statement with. The opportunity to switch to renewable supplies and install on-site renewable technologies is great and would help it become self-reliant and perhaps generate revenue long into the future.

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Though, it has to be highlighted that hybrid technology equipment is being used, which will contribute to reduce CO₂ emissions.



The following observations regarding the previous certification in 2015 were made during the visit:

- Acquisition of 19 hybrid walk behind mowers have been made, which will result in lower fuel consumption and better playing surfaces
- Earthworks in holes 4, 5, 8, 11 and 17 to accommodate the Ryder Cup public areas resulted in 30,000 m³ of soil needed to be moved
- Soil extracted from the new drainage and irrigation drenches was recycled in order to fill the cut & fill process, accomplishing landfill avoidance rate
- Mulch paths for players & spectators and flower beds have been built thanks to the shredding of the course trees pruning, avoiding using invasive species. Only autochthonous material is used.
- Water coming from the drainages of a 60% aprox. of the total surface of the course is recycled and sent to the irrigation lake. Average annual irrigation water consumption is 220,000 m³/ year, from which 56% is groundwater and 44% is recycled thanks to the new reservoir and the new drainage system
- More than 340 tons of material is recycled every year, including glass, plastics, papers and organics
- Sand for fairways topdressing purposes is brought from Paris beach (*Paris Plage*) after every summer
- Big rocks (" *pierre de meuliere*") extracted during the shaping of the course where put together in piles in order to create "enrockments", which represent today an important microhabitat for lichens, bats, and other species
- The greenkeeping team is making mulch in a 2-year process with a mix of clippings, leaves, branches, earth and leaves coming from the cleaning and set up of the courses. The mulch is then used for gardening purposes

Community

LGN is the focal point in the build up to The Ryder Cup but also one of the main points in the French Federation plan for the development of 6 and 9-hole short course facilities to introduce more people to the game of golf. 96 short courses have been built since 2008 when LGN entered the bidding process for The 2018 Ryder Cup, and some 40 further projects exist with the French Golf Federation all over country today. These are mainly 6-9 hole facilities in the €10-25 cost range. A campaign "GoforGolf" is being rolled out helping people take that first step into golf: visitors to LGN are able to enjoy the facilities while the work

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continues on L'Albatros Course as L'Aigle and th L'Oiselet courses, along with the golf academy, remain open. LGN has evolved from a public facility to a world-class destination, while still remaining accessible and providing a public benefit.



The following observations regarding the previous certification in 2015 were made during the visit:

- LGN and the local government have cooperated to achieve the restoration of “Porte du Merantais”, and old gate to Versailles Palace
- LGN keeps teaming up with environmental agencies, such as LOP or the Natural History National museum, adding socio-economic and environmental value to the course
- LGN continues to host the French Open and it is now preparing for the Ryder Cup, one of the biggest events in the world of golf
- A significant increase of post in social media has taken place. Frequent activity in portals such as Facebook or Twitter is a reality, as well as the presence of the head of agronomy in conferences and technical events.

Conclusion

I, Pablo Munoz Vega, independent accredited verifier, recommend Le Golf National, to be awarded the GEO Certified® ecolabel again because

- LGN supports the greatest team event in the world of golf and has a great opportunity to make sustainability visible to a vast audience
- The effort made in terms of environment protection and sustainability is a journey that will be not for the Ryder Cup, but for the next years
- Implementation of an ambitious strategy to reduce water consumption, while maintaining turf quality and excellent playability conditions
- A sustainable approach on turfgrass management, based on reducing maintained areas, the establishment of native fine fescues in rough areas and allowing a controlled growth of native Poa in greens has led to a tough but fair golf test and excellent playing conditions
- Continued commitment to cooperate with authorities, administration and environmental bodies in order to add value to ecosystem services such as water management, nutrient management and cultural services
- Continued determination in reducing contamination by pollution control and good practice in waste management

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- Strong presence in social media encourages the aims of LGN to not only promote the game, but also be an example of how to host a big event while keeping environmental standards

