GEO Certified® Report
Ljunghusens Golf Club

Prepared by independent verifier, Kerstin Antonsson

Certified by GEO Foundation: December 2021
Valid until: December 2024

“Ljunghusens Golf Club is a well-managed golf course in spectacular ecological surroundings of heathland habitat and the Baltic Sea. The club has a long experience of environmental and nature improvements and is probably facing one of the most demanding sustainability challenges with climate changes and expected raised sea levels in the future. I look forward to seeing the long-term planning for action in the new masterplan document and its sustainability contributions. The continuation of work with extended modern irrigation for the holes 19 – 27 and the improved safety of a new solution for the driving range will, I’m sure, be a great success.”

Kerstin Antonsson

(GEO accredited independent verifier)

Introduction

GEO Foundation is pleased to confirm that **Ljunghusens Golf Club** has successfully achieved GEO Certified® status for its outstanding work to foster nature, conserve resources and support the community.

GEO Certified® is the most respected certification for golf, based on a credibly and transparently developed modern sustainability Standard of best practice.

Ljunghusens Golf Club has:

1. Met the required certification criteria for sustainable golf operations
2. Successfully completed the official third-party verification process
3. Successfully passed the final evaluation by GEO Certification Ltd. (autonomous subsidiary of GEO Foundation)

GEO agreed with the conclusions of the official verification report, that, having achieved all mandatory criteria; and with specific Continual Improvement Points set for the future, **Ljunghusens Golf Club** should be awarded GEO Certified® status.

For the certification period stated above, **Ljunghusens Golf Club** can therefore claim a position as a leader in advancing sustainability in golf – making important contributions in protecting nature, conserving resources and strengthening communities.

The GEO Certified® Report that follows comments on the actions undertaken against the criteria, as observed by the independent verifier during the assurance process.

Certification is nearly always the result of a dedicated team effort resulting in many practical and valuable social and environmental results around the golf course, maintenance facility and clubhouse. These dedication and leadership qualities are an important part of ensuring the resilience of the golf facility and the golf industry into the future and also as part of society's wider effort to pull together for people and planet.

We congratulate all involved.

Jonathan Smith
Founder and Executive Director, GEO Foundation
GEO Certification Ltd. Board Member

Kelli Jerome
Executive Director, GEO Foundation

Richard Allison
Manager, GEO Certified Facilities

Verification and Certification

Verification

The official third-party audit was carried out by an independent verifier, accredited by GEO to undertake verifications of golf facilities applying for certification.

Verification involves reviewing practices and data, using the International Voluntary Standard for Sustainable Golf Operations as the guide to ensure comprehensive and consistent evaluation of performance. A detailed verification report is submitted for evaluation by GEO Certification Ltd, a subsidiary of GEO Foundation.

Certification

GEO Certification Ltd, an autonomous subsidiary of GEO Foundation [both not-for-profit entities], undertook a full review of all content submitted through the OnCourse® online platform and the report submitted by the verifier, ensuring:

- Comprehensiveness – that activities undertaken touched on all elements of the Standard
- Consistency – that the verification approach was balanced, well weighted and with consistent depth of evaluation across each theme
- Accuracy - matching the verification report with evidence submitted by the golf facility to ensure statements and claims were accurate

GEO Foundation is an international not-for-profit founded to advocate, support and reward sustainability in and through golf. Over more than ten years, the group has worked collaboratively with dozens of golf industry associations and government and non-government organisations around the world, to help golf become a sustainability leader, striving for a net positive social and environmental impact. In addition to managing and assuring GEO Certified®, GEO Foundation also provides a suite of credible, practical programmes for golf facility management, new golf developments and golf tournaments called OnCourse®, often delivered in partnership with national golf bodies. Find out more at **www.sustainable.golf**

Credibility

GEO Certified® is part of the ISEAL Alliance, a group of the world's foremost credible certification systems including Fairtrade, Rainforest Alliance, Forest Stewardship Council, Marine Stewardship Council and many others. GEO Foundation earned and retains full membership of the ISEAL Alliance global association following a rigorous evaluation against the ISEAL Codes of Credibility in Sustainability Standards and Certification. The ISEAL Codes cover standard-setting, assurance, and monitoring and evaluation. Find out more at **www.isealalliance.org**

The Sustainability Agenda for golf covers the following themes and action areas:

THEMES	ACTION AREAS
Nature	• Habitats & Biodiversity • Turfgrass management • Pollution prevention
Resources	• Water • Energy • Materials
Community	• Partnerships & Outreach • Golfing & Employment • Advocacy & Communications

Included below are the observations made by the Independent Verifier against each item in the Standard.

NATURE

N1 Habitats and Biodiversity

Objectives	Requirements	Mandatory Practices	Verifier Notes
N1.1 Understand the site and surroundings	**N1.1.1 Sound understanding of the nature and landscape value of the site**	Map all habitats and vegetation types on the site; Regularly update landscape / biodiversity surveys	Ljunghusen GC is located in Vellinge municipality in the south of Sweden. The facility was built in 1932 and has had 27 holes since 1965. The club area is in a nature reserve and Nature 2000 area.

				The course is built on sand (old seabed) and has a links character. It's situated in a fantastic nature reserve by the sea and includes about 100 acres. The dominating landscape is heathland and wetland with high conservation value. Bog myrtle, heather, red fescue, wild rye, and everlasting flower plants give the holes their unique heath character. In recent years, walkways and grit middle sections of the course have been replaced with grass areas. This has led to an increase in the managed area of about 2 hectares. Between 2018 – 2019, course remodelling's have been done at; green areas on 1, 3,4,6,8, and 9, new green on no 7, bunker on 1-9.
		N1.1.2 Knowledge of legal designations for protected areas, habitats and species	Understand legal responsibilities for protected landscapes and species; Record and monitor protected, endangered, or rare species found on the site	There are 377 species listed and the list has been updated recently. However, protected or rare species are not specific pointed out. For identification of rare or protected species look at SLU Artdatabanken - ett kunskapscentrum för arter och naturtyper | SLU Artdatabanken An older inventory of frogs and reptiles from 1997 shows a description of rare and protected species in the area. An update to the flora inventory is currently being carried out. The last inventory is 12-13 September, and it is to be completed in October 2021. Specific management requirements are set by the county administrative board. Discussions with authorities about the area's management and development take place regularly. **Continual Improvement Point** In order to point out rare and protected species that are identified in the inventory lists for the area, these can be marked in the lists. In this case, specific conservation measures may be sought and established for these species.
		N1.1.3 Understanding and respect for cultural heritage	Protect any archaeological, historical or cultural designations on the site	Eel fishing rights border stones are located at the 21st hole and mark the border between Skanör and Falsterbo's leased eel fishing and taxed eel fish from 1722. In rough and as a groove in semi-rough on several holes, there are rings after peat quarry for fuel, the peat was set up inside the ring to dry. *(©Bertil Carstam 2015)*

	N1.2 Opportunities to naturalise the course	**N1.2.1 Measures taken to identify and minimise the required area of managed turfgrass**	Observe, track and / or monitor golfer play	A new sectorized and vector-controlled irrigation facility has meant that water is no longer thrown off the fairways. This means less care needs to prevent the grass from penetrating and competing away the dry and lean heather when the ground is kept moist. The boundaries between dry and lean soil and green fairways are more distinct.
	N1.3 Actively manage habitats for wildlife	**N1.3.1 Projects to manage habitats in the best way for wildlife and golf**	Regularly review and follow a habitat management plan; Prioritise native species when planting and landscaping	During the years, the club has focused on developing its beekeeping, insect hotels, and conducting tours of nature on the course. The habitats outside fairways and direct playing areas have been very well managed, and rejuvenation in heather and pore stocks has been made. Seeds have been taken care of for re-seeding. Young birch trees and bushes have been disforested to maintain heather land and counteract succession. Ecological life is taken into account when cleaning ditches and ponds. In order to create a functioning biological cycle, birdhouses for starlings have been set up to invite a natural predator for Tipuliodea. **Continual Improvement Points** The management of the habitat is carried out when time and resources allow. A habitat management plan can be created to visualize the work and the area's importance, accessible to members and other stakeholders. It can also support existing and future course staff's continuous planning of measures on what and when to implement management measures over time. A management plan for habitats can provide a long-term opportunity for the board to ensure sufficient resources and compliance with the nature reserve's management instructions.
	N1.4 Conserve key species	**N1.4.1 Practical conservation measures for priority species**		The area is classified as Natura 2000 (habitat and birds) as well as nature reserves. Special management instructions are available to preserve key species and the nature of the landscape.
	N2 Turfgrass			
	N2.1 Maintain optimum turf and soil health	**N2.1.1 Appropriate turfgrass varieties adapted to climatic and other geomorphological factors**	Select appropriate grass species for climate	Transition to more appropriate grass species is in progress. Today, the proportion of red fescue on the greens has increased from previous years. The result is less need for irrigation and fertilizer as this grass is more durable.

		N2.1.2 Practices to maintain good soil structure and condition		The management plan is accessible and well documented. It is a valuable tool to assist the course manager and the course committee in meeting the high expectations of today's golfers. It is also a document describing activities on the course to give members and green fee guests an understanding of the versatile and great work required and put in place to keep the course in good condition. Dry years in 2018 and 2019 and more rounds played during the pandemic have increased the pressure on the course. The management has been reassessed. Aeration of the greens has been increased in recent years, and some greens are sometimes closed for recovery.
		N2.1.3 Careful and responsible fertiliser application throughout the year to avoid over-fertilisation	Undertake soil tests and nutrient analysis	There are well-documented plans and follow-ups for fertilization. Fertilizations are optimized. Granulated fertilizers from organic sources are used. An increased amount of fertilizers during 2020 can be related to the minor increasing turf area, specific preparation to handle the pressure from more rounds and for the European Men's Championships competition.
	N2.2 Prioritise mechanical maintenance	**N2.2.1 Non-chemical pest, disease and weed management**	Sharpen mowing blades; Remove surface moisture; Hand weeding	Active work is done with, among other things, cutting off broadleaf grasses, remove of organic material to reduce the proportion of demanding species and increase Agrostis c. and Festuca r. Mower blades are sharpened regularly.
	N2.3 Use chemicals responsibly	**N2.3.1 Application of chemicals only when necessary to prevent or cure defined / identified turf health issues**	Establish patterns and levels of risk for pests and diseases; Scout the course daily for early signs of pests and disease; Accurate pest and disease identification; Map and track pest and disease hotspots; Establish pest and disease thresholds	The greenkeeper and crew have a high level of competence about diseases, their emergence, and establishment on the course. Notes are made for actions, location, and reason for applications. Greens and fairways are visually inspected during daily management.
		N2.3.2 Application of chemicals with full safety precautions	Use only legally registered and approved products; Ensure staff are fully qualified and licenced to use pesticides; Regularly calibrate and test applicators; Use appropriate protective equipment; Dilute and dispose of leftover product on untreated areas of turf	Diluted and disposed of leftover products are spread on untreated areas of turf. The surfaces will be plotted on maps. Four employees have applicator license. The current applicator is brand new and not yet required to have a regularly calibration and test. Personal protecting equipment is available when handling pesticides.

N3 Pollution Prevention			
N3.1 Prevent pollution across the entire site	**N3.1.1 Practical measures to ensure pollution risks are minimised from golf course operations**	Document procedures for emergency spill responses; Maintain mowing buffer zones around water and all ecologically sensitive areas; Maintain spraying and spreading buffer zones around water and all ecologically sensitive areas; Create a map / aerial visual reproduction, drawing etc of the course showing buffer zones and no-spray, no-spread areas.	The use of pesticides and fertilizers has been kept to a minimum. Safety distances around the dams and streams are applied and can preferable be presented on maps. Emergency procedures are in place and protection equipment for spillage are available.
	N3.1.2 Practical measures to ensure pollution risks are minimised from clubhouse operations	Ensure all hazardous materials are safely and securely stored; Ensure compliance with all required standards and systems for hazardous waste and wastewater discharge	Pesticides are kept tidy in a lockable chemical cabinet. The cabinet is labeled with the emergency procedure. Protection equipment for spillage and personal are available. For hazardous waste they have Lots ® Environment system procured. It is a container system with type-approved packaging, which is very smooth for storing and transporting hazardous waste. The system is easy to adapt and meet all legal requirements. Hazardous waste and substances are taken care of by a licensed company.
	N3.1.3 Practical measures to ensure pollution risks are minimised from maintenance facility operations	Ensure wash areas are on impermeable, leak-free surfaces; Mixing and loading of pesticides and fertilisers over an impermeable surface; Triple rinse pesticide containers and applicators	The design of a functionally optimized wash pad and mixing surface that also prevents possible leakage to the surroundings has been in the planning for several years. In recent years, the municipality has announced measures to counteract the impact of a potential rise in sea level. This infrastructure planning will be decided in court in the next few years and has delayed investments in changed course layout and new properties (machinery hall). **Continual Improvement Points** Once the municipal plan for the area has been decided in court, there is no longer any obstacle for the club to establish a modern washing and mixing area to minimize the pollution risks to the surroundings.
N3.2 Safely manage hazardous substances	**N3.2.1 Legal compliance in the storage, handling, application and safe disposal of all hazardous substances**	Maintain a register of hazardous materials available to authorised staff; Safe storage in secure and ventilated concrete or metal building; Sufficient storage capacity; Impermeable flooring;	The fuel store tank and smaller fuel containers are stored in secondary containers with impermeable flooring and edges. The fuel tank is regularly inspected and controlled. Spill accident materials and fire extinguisher are in place.

			Spill containment kits present; Emergency wash area; Fire extinguisher in the immediate area; Secondary containment for fuel, either externally constructed, or integrally manufactured; Regular inspection of storage tanks	**Continual Improvement Point** First aid (eye rinse), personal protective equipment, and current safety data sheets (printed) must be available close to storage and handling of corrosive substances for turf management (fertilizers).
	N3.3 Responsibly manage waste / storm water	**N3.3.1 Appropriate wastewater usage and discharge licences**	Wastewater discharge licence; Appropriate treatment of machinery wash water (impermeable surface, oil / grease / clipping separation)	Sanitary wastewater is disposed of municipally. Wastewater from the machine hall workshop is directed to an oil separator. See infrastructure for wash bay/mixing area in N3.1.3.

RESOURCES

R1 Water

Objectives	Requirements	Mandatory Practices	Verifier Notes
R1.1 Minimise water demand	**R1.1.1 Measures to reduce the need to consume water**	Target irrigation to essential playing surfaces only	When the new and modern irrigation system was installed on holes 1-18 in 2019, the number of sprinklers has increased so that the entire fairways can now be irrigated. This may mean that water consumption might increase despite more efficient irrigation. The amount of irrigation in recent years has almost doubled in 2019 compared to 2018 and 2020. **Continual Improvement Point** Careful monitoring and evaluation of the new irrigation system should be carried out over the next few years to learn the operation and efficiency of the new installation.
R1.2 Maximise water efficiency	**R1.2.1 Practical measures to use water more efficiently on the golf course**	Conduct regular irrigation performance checks; Provide staff training on efficient irrigation practices; Ensure effective application of water to target areas;	The humidity in the soil is measured regularly during the high season. Target levels for moisture content are in place. A new and modern sectorized irrigation system has been installed for holes 1 – 18. Irrigation is controlled with Rainbird software. The new system is very effective because it can irrigate in shorter periods and

			Ensure irrigation schedules are informed by weather patterns and soil moisture analysis	during nights when vaporization is low. It also has opportunities for sector irrigation areas and manual settings for specific irrigation vectors. The plan is to continue with irrigation modernizing for holes 19 to 27 in the future. Groundwater used for irrigation contains slightly high salinity levels from seawater penetration, which means the water is not optimal for long-term irrigation. Discussions are held on whether desalination can solve the problem in the future.
		R1.2.2 Practical measures to use water more efficiently in buildings	Audit water use regularly; Review bills frequently and look for irregularities; Encourage water-saving practices amongst staff and visitors; Categorise and track water consumption	Water-saving installations with low-flow toilets and faucets are in place in the clubhouse since previous years.
	R1.3 Source water responsibly	**R1.3.1 Measures towards alternative, lower quality sources of water**	Ensure appropriate water abstraction permit and reporting, as required	Groundwater is used for course management. Municipal drinking water is used in buildings.
	R2 Energy			
	R2.1 Reduce energy demand	**R2.1.1 Measures to reduce the amount of energy consumed in course maintenance**	Minimise areas of managed turf to reduce mowing, irrigation, and turf inputs	See chapter R1.2.1 about irrigation. The proportion of machines using fossil fuels for propulsion has increased from 3 to 5. There are no alternative solutions on the market yet and the current procured lease does not give the possibility of changing vehicles. Monitoring of the technical development of work vehicles and mowers is followed. In 2020, the club organized a national greenkeeper meeting with machine suppliers where this was discussed. A robot has been installed for ball picking on the driving range. Fossil-powered hand tools have been replaced with electric ones.
	R2.2 Maximise energy efficiency	**R2.2.1 Measures to use energy and fuels more efficiently in buildings**	Audit energy use regularly; Regularly review bills; Categorise and track energy consumption	Over the years, the club has made continuous improvements to reduce energy consumption. Energy-efficient lighting and insulation of buildings are some examples. The restaurant has recently invested in new refrigeration and freezer.

				Electricity consumption is slightly showing an increasing trend of use. It can be related to a positive trend of more golfers and visitors and higher facility use. **Continual Improvement Point** In the coming period, it can be appropriate to renew the dialogue with the municipal or another part to get energy and climate change advice and raise the ambition to follow up the energy performance and examine the possibility of decision of new energy objectives and effectiveness.
	R2.3 Source energy responsibly	**R2.3.1 Measures to source alternative, renewable forms of energy**	Determine potential sources of renewable energy in the area and on-site, through renewable energy providers	The facility uses renewable electricity for clubhouse activities, the restaurant, maintenance facilities, the villa, and the pumphouse. Heating is distributed through a geothermal plant.
	R3 Materials			
	R3.1 Reduce materials demand	**R3.1.1 Products and materials selection based on necessity, including opportunities for recycled, reused and locally sourced alternatives**	Undertake a review of materials consumed	Waste is sorted into a number of fractions in order to be recycled as materials or energy. See comments below in R3.3.1.
	R3.2 Purchase responsibly	**R3.2.1 Practical use of an ethical / environmental purchasing policy**	Adopt a sustainable, or ethical / environmental purchasing policy to maximise the use of locally sourced goods and goods made from recycled, recyclable and certified materials	The club lacks a specific purchasing policy but has stated in its Environmental policy that it should choose technology, materials, and transports with the least possible environmental impact. **Continual Improvement Point** An explicit purchasing policy decided by the Board of Directors can provide the business with the support needed to broaden the area of responsibility and prioritize most sustainable purchases based on work environment, ethical and ecological aspects in the same terms as economic aspects.
	R3.3 Reuse and recycle	**R3.3.1 Waste stream separation for maximum recycling and re-use opportunity**	Demonstrate waste separation, reuse and recycling; Track how much waste goes to landfill, or is reused / recycled	Waste is sorted into a number of fractions in order to be recycled as materials or energy. Labeled bins and containers are placed in the club area and in the machine hall. **Continual Improvement Point** The club must be aware of continuing to save data and statistics for coming years as well. The data is the verification of an improved sustainability work over time.

R3.4 Demonstrate legal compliance	**R3.4.1 Compliance with all local and regional waste management regulations**	Use authorised waste and recycling contractor for general, hazardous, industrial and green waste	The club complied with local and regional waste management regulations. Authorized waste and recycling contractors are used for both housekeeping waste (called municipal waste in new regulations), industrial and hazardous waste.

COMMUNITY

C1 Outreach

Objectives	Requirements	Mandatory Practices	Verifier Notes
C1.1 Diversify access and provide multi-functionality	**C1.1.1 Social and recreational activities at the facility**		The total property area is 105 hectares. The facility includes a clubhouse with a restaurant, pro-shop, practice area, and maintenance buildings. The total area of buildings is 1750 m^2. The club area offers public access to biking, walking and nature trails as well as birdwatching. The club are conducting tours of nature. Members and external visitors can use the restaurant and conference facility for meetings, parties, and corporate events.
C1.2 Provide for volunteering and charity	**C1.2.1 Opportunities available for volunteering and support of charities and good causes**		The ongoing covid-19 pandemic has led to restrictions on social activities in 2020.
C1.3 Establish active community partnerships	**C1.3.1 Positive and constructive engagement with neighbours, the local community and other groups**	Create a 'sustainability working group'	A business network meets early Friday mornings during the season to network, breakfast, and play golf. Joint competitions and exchange activities are organized with other golf clubs in the surrounding area.

C2 Golfers & Employees

	C2.1 Improve health and wellbeing	**C2.1.1 Benefits to human physical and mental health from golf and facility activities**		The new Master Plan for the facility has identified and prioritized reducing the risk for people in the environment of being hit by balls from the driving range. New electric hand tools have been inserted. These eliminate vibrations and disturbing noises, which means that course maintenance can be carried out during ongoing golf without interference. **Continual Improvement Point** The list of chemicals needs to be reviewed. The organization must ensure current safety data sheets for all hazardous chemicals, considered and available for all employees. Old chemicals that are no longer in use should be discarded. First aid (eye rinse), personal protective equipment, and current safety data sheets (printed) must be available close to storage and handling of corrosive substances for turf management (fertilizers).
	C2.2 Be open and inclusive	**C2.2.1 Inclusivity and diversity in membership and visitor policies**	Demonstrate inclusive policies for members and visitors	Membership is divided into a smaller number of groups with differentiated rates. Greenfee collaborations exist for juniors and affiliated clubs to create better opportunities for juniors to play on different courses.
	C2.3 Employ fairly and safely, and provide career opportunities	**C2.3.1 Ethical and legal employment, working conditions and professional development**	Follow all relevant national legislation and best practice for employment, health & safety etc	Human rights and national occupational health and safety regulations are followed. Young people and young adults are given the opportunity to work at the course in summer.
	C3 Communications			
	C3.1 Engage golfers and members	**C3.1.1 Communications activities that raise awareness and understanding amongst members and visitors**	Provide information on the facility's sustainability commitments, actions, or achievements	The club presents three exemplary documents to engage members and stakeholders for the club: The management plan for the course's objectives and management is available to members and visitors on the club's website. The management plan is very well described and gives stakeholders an excellent opportunity to understand the operation of the course. Similarly, the club's business description is available for the next three-year period, 2020 - 2024. This gives members and other stakeholders a lot of insight into the orientations and objectives and how the club's work is planned, conducted, and prioritized.

				The third documentation, a professional and comprehensive description of the club's operations, is the activity story shared with members and other stakeholders for the annual meeting. The documentation provides a clear understanding of how the past year has been conducted and how the coming year is planned operationally and economically.
	C3.2 Celebrate and promote sustainability	**C3.2.1 Activities that raise awareness and engage people in the wider community**	Provide evidence of external communications and community engagement	In 2020, the club organized a national greenkeeper meeting with machine suppliers where sustainability was discussed. Communication takes place with authorities and NGO's such as local nature conservation association (FNF, Falsterbonäsets Naturvårdsförening) and Skåne County Administrative Board. The ongoing covid-19 pandemic has led to restrictions on social activities and competitions in 2020. The club has hired a professional course architect to bring in suggestions for improvements to the course. The club will present this master plan to members and stakeholders in autumn 2021. A recommendation is to ask the architect to demonstrate the sustainability benefits of the new master plan. In this way, sustainability work can be made clear to members and stakeholders.

Golf and Sustainability

Among all sports, golf has a particularly close relationship with the environment and communities, golf facilities can bring many benefits to people and nature - from the protection of greenspace and conservation of biodiversity; healthy recreation for all ages; local supply chains; and jobs, tourism and other forms of economic value.

Adopting a more sustainable approach is also good for golf. It's about presenting a high-quality golf course and providing a memorable experience in natural surroundings. It's about being as efficient as possible. And it's about supporting the community in a range of ways that bring increased recognition, respect and contact.

At a broader level, it's important that golf credibly demonstrates its commitment, and its social and environmental value – strengthening the sport's image and reputation for the long term.

Golf facilities that participate in OnCourse®, an international sustainability initiative assured by the non-profit GEO Foundation, are taking a comprehensive approach and striving to be leaders in the community.

Find out more at www.sustainable.golf