



**GEO Certified**<sup>®</sup>

# GEO Certified<sup>®</sup> Report Linköpings Golfklubb

Prepared by Independent Verifier, Kerstin Antonsson

Certified by GEO Foundation: September 2019  
Valid until: September 2022

**GEO Certified**<sup>®</sup>

 **GEO  
Foundation**  
Sustainability in and through golf

*“Linköpings Golf Club is a very well managed facility and a positive, high-quality asset for the urban community.”*

*Kerstin Antonsson*

*GEO accredited Independent Verifier*



## Introduction

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GEO Foundation is pleased to confirm that Linköpings Golfklubb 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.

Linköpings Golfklubb 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, Linköpings Golfklubb should be awarded GEO Certified® status.

For the certification period stated above, Linköpings Golfklubb 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

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## 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](http://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](http://www.isealalliance.org)



# Verifier's Report

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

THEMES	ACTION AREAS
Nature	<ul style="list-style-type: none"> <li>• Habitats &amp; Biodiversity</li> <li>• Turfgrass management</li> <li>• Pollution prevention</li> </ul>
Resources	<ul style="list-style-type: none"> <li>• Water</li> <li>• Energy</li> <li>• Materials</li> </ul>
Community	<ul style="list-style-type: none"> <li>• Partnerships &amp; Outreach</li> <li>• Golfing &amp; Employment</li> <li>• Advocacy &amp; Communications</li> </ul>

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	<b>(Course management)</b> Map all habitats and vegetation types on the site; Regularly update landscape / biodiversity	The course is a classic 18-hole parkland course.  The facility is located in an urban area with nature types of sand pine forest, dry meadow, and small water.

		surveys	<p>The course is built on material from the ice-age. The soil layers consist mainly of av moraine and clay.</p> <p>The area is described in an excellent management plan with maps, from 2014.</p>
	<b>N1.1.2 Knowledge of legal designations for protected areas, habitats and species</b>	<p><b>(Course management)</b> Understand legal responsibilities for protected landscapes and species; Record and monitor protected, endangered, or rare species found on the site</p>	<p>The course is not a nature protected area. A detailed and very good list of species is available for birds, amphibians, insects, vascular plants, mammals, and fungi. A specific tree survey has been made by a botanist.</p> <p>According to the management plan, the area has not many nature conservation interesting species, but protected-worthy and protected species have been found such as the bug <i>Northorhina muricata</i>, the mushroom <i>Porodaedalea pini</i> and larger and smaller newt, <i>Lissotriton vulgaris</i>, <i>Triturus cristatus</i>.</p> <p>The area has a special value as a spreading corridor for flora and fauna.</p>
	<b>N1.1.3 Understanding and respect for cultural heritage</b>	<p><b>(Course management)</b> Protect any archaeological, historical or cultural designations on the site</p>	<p>The facility has no archaeological, historical, and cultural relics but in areas close to the golf course there are settlements from the stone age and the bronze age found.</p>
<b>N1.2 Opportunities to naturalise the course</b>	<b>N1.2.1 Measures taken to identify and minimise the required area of managed turfgrass</b>	<p><b>(Course / club management)</b> Observe, track and / or monitor golfer play</p>	<p>The course masterplan will be updated, and the course might be reworked after the autumn's dialogues with lease and land issues with the municipality. A draft of a partial new course line has been developed.</p> <p>The total area of tees is reduced during the current year (2019). The area of the "thick rough" will be increased during the 2019 season. This means that less mowing will be performed (course optimization).</p>
<b>N1.3 Actively manage habitats for wildlife</b>	<b>N1.3.1 Projects to manage habitats in the best way for wildlife and golf</b>	<p><b>(Course management)</b> Regularly review and follow a habitat management plan; Prioritise native species when planting and landscaping</p>	<p>The management plan includes descriptions, objectives, and measures to ensure the best management of habitats in order to enhance and increase biodiversity. The measures are divided between the municipality and the golf club. The municipality is mostly responsible for all forest clearing.</p> <p>There are plans to increase the area with meadows. Special instructions for this have been obtained from experts 2019.</p>
<b>N1.4 Conserve key species</b>	<b>N1.4.1 Practical conservation measures for priority species</b>		<p>An excellent table of interventions, with detailed descriptions, goals, ecosystem services, and stakeholders affected, are developed for newt, bee-bunkers, bird nests, fauna, meadow, edge zones, etc.</p> <p>There are also placed bird boxes and a beehive at the course.</p>

N2 Turfgrass			
N2.1 Maintain optimum turf and soil health	N2.1.1 Appropriate turfgrass varieties adapted to climatic and other geomorphological factors	<b>(Course management)</b> Select appropriate grass species for climate	<p>Poa annua is the dominated grass species on the entire course. There are no plans to alter the turf because of the very costly and labor-intensive causes to do so.</p> <p>The climate impact has extended the season for playing which means more pressure on the turf and a need for more fertilizers to cope with turf stress.</p>
	N2.1.2 Practices to maintain good soil structure and condition		<p>A detailed turf management plan shows when and where measures and maintenance will be taking place.</p> <p>They get current pH values in the soil through soil samples. They enhance soil structure with products like Eon Bion, a biologically active stimulator with humic acid.</p>
	N2.1.3 Careful and responsible fertiliser application throughout the year to avoid over-fertilisation	<b>(Course management)</b> Soil tests and nutrient analysis	Yearly nutrient evaluation analysis has been carried out. The detailed information on levels of total, available, and targets for nutrients will help to avoid overfertilization.
N2.2 Prioritise cultural management	N2.2.1 Non-chemical pest, disease and weed management	<b>(Course management)</b> Sharpen mowing blades; Remove surface moisture; Hand weeding	<p>Mowing blades are sharpened regularly.</p> <p>Surface moisture is removed from greens and fairways to keep the turf as dry as possible. Other mechanical care as surface aeration, dressing, and flattening are some of the measures.</p>
N2.3 Use chemicals responsibly	N2.3.1 Application of chemicals only when necessary to prevent or cure defined / identified turf health issues	<b>(Course management)</b> 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	<p>The use of pesticides is kept to a minimum and efforts for prevention are prioritized. See above N2.2.1.</p> <p>In unfavorable climates, diseases usually occur first on green 12, 15 and 16. All greens are checked daily. Indicator places are mapped. This map should be improved with tracks and trends. The ambition is to create a digital map for the entire course where each green area can be more clearly marked and followed up.</p> <p>External experts, course consultants, colleagues, and pesticide suppliers are asked if there is a need for information or knowledge.</p> <p>The club is actively working accordingly to Integrated Pest Management (IPM).</p>

	<b>N2.3.2 Application of chemicals with full safety precautions</b>	<b>(Course management)</b> 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	Two staff employees are qualified and have a current license to use pesticides.  Chemicals are used in accordance with the authorization. The spraying equipment is tested and has approval from the Swedish Board of Agriculture.  Spraying equipment and containers are rinsed and cleaned with water. Filling and cleaning are done in the field.  Untreated areas of turf are used for disposal of diluted leftovers.
<b>N3 Pollution Prevention</b>			
<b>N3.1 Prevent pollution across the entire site</b>	<b>N3.1.1 Practical measures to ensure pollution risks are minimised from golf course operations</b>	<b>(Course management)</b> 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.	Spraying buffer zones of 6 meters are applied around sensitive areas. These are also plotted on a map.  A new emergency spill response plan must be developed and revised.
	<b>N3.1.2 Practical measures to ensure pollution risks are minimised from clubhouse operations</b>	<b>(Club management)</b> Ensure all hazardous materials are safely and securely stored; Ensure compliance with all required standards and systems for hazardous waste and waste water discharge	Contracts for disposal of hazardous waste from the facility are established with local companies that are specialists in hazardous waste and disposal.  Waste water is led to the municipal waste water treatment plant.
	<b>N3.1.3 Practical measures to ensure pollution risks are minimised from maintenance facility operations</b>	<b>(Course management)</b> 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	Spraying equipment and containers are rinsed and cleaned with water. Filling and cleaning are done in the field.  See also N3.2.1 and R3.4.1 below.
<b>N3.2 Safely manage hazardous substances</b>	<b>N3.2.1 Legal compliance in the storage, handling, application and safe disposal of all hazardous substances</b>	<b>(Course management)</b> 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; Spill containment kits present; Emergency wash area;	Hazardous waste is provided to a licensed contractor.  The fuel tank is approved and has a secondary containment.  Fire extinguishers are placed on machines and in locations with fire risks.  Minor chemicals are stored in different locations. It can be appropriate to inventory and discard some of them and then update the chemical list.

		Fire extinguisher in the immediate area; Secondary containment for fuel, either externally constructed, or integrally manufactured; Regular inspection of storage tanks	Flammable fuels in smaller cans and packages are stored separately outside in a steel transport container.  Chemicals are stored and handled in a sufficient way. A decontaminating agent is available.
<b>N3.3 Responsibly manage waste / storm water</b>	<b>N3.3.1 Appropriate waste water usage and discharge licences</b>	<b>(Course management)</b> Waste water discharge licence; Appropriate treatment of machinery wash water (impermeable surface, oil / grease / clipping separation)	The indoor wash pad is used for vehicle washing and is connected to oil separator. A hardened surface with roof is available outdoor to rinse off the grass. This pad is also connected to an oil separator. The oil separator has been controlled during 2019.  Waste water is led to the municipal waste water treatment plant.

<b>RESOURCES</b>			
<b>R1 Water</b>			
<b>Objectives</b>	<b>Requirements</b>	<b>Mandatory Practices</b>	<b>Verifier Notes</b>
<b>R1.1 Minimise water demand</b>	<b>R1.1.1 Measures to reduce the need to consume water</b>	<b>(Course management)</b> Target irrigation to essential playing surfaces only	Plans and discussions have and will be conducted with the municipality and the County Administrative Board to set up more ponds that can accommodate the course with irrigation water from, for example, surface run-offs and storm water instead of today's use of municipal cleaned water.  An excellent table of intervention, with a detailed description, goal, ecosystem services, and stakeholders affected are developed for irrigation.
<b>R1.2 Maximise water efficiency</b>	<b>R1.2.1 Practical measures to use water more efficiently on the golf course</b>	<b>(Course management)</b> Conduct regular irrigation performance checks; Provide staff training on efficient irrigation practices; Ensure effective application of water to target areas; Ensure irrigation schedules are informed by weather patterns and soil moisture analysis	In the document described above in R1.1.1, it also includes suggestions on how to reduce water used for irrigation.  TDR soil moisture sensor is used.  Rain-Bird is used as irrigation software and can be steered from a mobile phone. Two greens have sectionized sprinklers. Irrigation studies have been carried out, which has meant that some sprinklers have been removed.

			Some areas have been drained.
	<b>R1.2.2 Practical measures to use water more efficiently in buildings</b>	<b>(Club management)</b> Audit water use regularly; Review bills frequently and look for irregularities; Encourage water-saving practices amongst staff and visitors; Categorise and track water consumption	All water consumption is compiled monthly together with the respective monthly average temperature and cost. The consumption is shown separately for different parts of the plant.
<b>R1.3 Source water responsibly</b>	<b>R1.3.1 Measures towards alternative, lower quality sources of water</b>	<b>(Course / club management)</b> Ensure appropriate water abstraction permit and reporting, as required	The water consumption is read and reported to the municipality that is the supplier.
<b>R2 Energy</b>			
<b>R2.1 Reduce energy demand</b>	<b>R2.1.1 Measures to reduce the amount of energy consumed in course maintenance</b>	<b>(Course management)</b> Minimise areas of managed turf to reduce mowing, irrigation, and turf inputs	The speed of the vehicles has been halved to save fuel.  The fleet has been invested with hybrid mowers.
<b>R2.2 Maximise energy efficiency</b>	<b>R2.2.1 Measures to use energy and fuels more efficiently in buildings</b>	<b>(Club management)</b> Audit energy use regularly; Regularly review bills; Categorise and track energy consumption	All electricity consumption is compiled monthly together with the respective monthly average temperature and cost. The consumption is shown separately for different parts of the plant.
<b>R2.3 Source energy responsibly</b>	<b>R2.3.1 Measures to source alternative, renewable forms of energy</b>	<b>(Club management)</b> Determine potential sources of renewable energy in the area and on-site, through renewable energy providers	Renewable electricity is used. A study of investment of solar panels is underway.
<b>R3 Materials</b>			
<b>R3.1 Reduce materials demand</b>	<b>R3.1.1 Products and materials selection based on necessity, including opportunities for recycled, reused and locally sourced alternatives</b>	<b>(Club management)</b> Undertake a review of materials consumed	The environmental plan contains a comprehensive description of measures and targets for monitoring waste management, waste quantities and the increase in the proportion of recycled materials.
<b>R3.2 Purchase</b>	<b>R3.2.1 Practical use of an</b>	<b>(Club management)</b>	There is a purchasing policy developed. It sets out guidelines for

<b>responsibly</b>	<b>ethical / environmental purchasing policy</b>	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	sustainable procurement and environmental considerations as Eco-labelling, energy consumption, life expectancy, recyclability, coordinated purchasing and suppliers' environmental work.
<b>R3.3 Reuse and recycle</b>	<b>R3.3.1 Waste stream separation for maximum recycling and re-use opportunity</b>	<b>(Club management)</b> Demonstrate waste separation, reuse and recycling; Track how much waste goes to landfill, or is reused / recycled	A newly built waste area with bins and containers for waste sorting at source will invite to a higher amount of separation.
<b>R3.4 Demonstrate legal compliance</b>	<b>R3.4.1 Compliance with all local and regional waste management regulations</b>	<b>(Club management)</b> Use authorised waste and recycling contractor for general, hazardous, industrial and green waste;	Authorized waste and recycling contractors are used for both housekeeping waste, industrial and hazardous waste. Waste is collected by the municipal contractor and the professional entrepreneur of hazardous waste; Stena.

<b>COMMUNITY</b>			
<b>C1 Outreach</b>			
<b>Objectives</b>	<b>Requirements</b>	<b>Mandatory Practices</b>	<b>Verifier Notes</b>
<b>C1.1 Diversify access and provide multi-functionality</b>	<b>C1.1.1 Social and recreational activities at the facility</b>		Efforts will be made to increase engagement for disability golfers.  The development of youth activities will increase.  Cross-country skiing is available on the course in winter.
<b>C1.2 Provide for volunteering and charity</b>	<b>C1.2.1 Opportunities available for volunteering and support of charities and good causes</b>		The club has allowed the course to an animal insurance company (Agria) that has arranged a dog walk as part of their CSR-work. Dog owners walk a route marked with stripes and contribute to raising money for organizations working with animals and benefiting dogs.
<b>C1.3 Establish active</b>	<b>C1.3.1 Positive and</b>	<b>(Club management)</b>	Meetings and gatherings take place with the municipality's

community partnerships	constructive engagement with neighbours, the local community and other groups	Create a 'sustainability working group'	representatives about the development of the area.  A vision for a future-oriented multifunctional urban facility has started to be shaped.
<b>C2 Golfers &amp; Employees</b>			
C2.1 Improve health and wellbeing	C2.1.1 Benefits to human physical and mental health from golf and facility activities		The golf play and visits in nature on the courses strengthen mental and physical health and wellbeing. The courses are mainly used by walking players with trolleys. Players need to show a medical certificate to rent a golf cart.  An indoor golf training hall is run jointly with Landeryds golf club and caters to golfers with training opportunities during the winter.
C2.2 Be open and inclusive	C2.2.1 Inclusivity and diversity in membership and visitor policies	<b>(Club management)</b> Demonstrate inclusive policies for members and visitors	The club is engaged in social sustainability by enabling golf together with the local stroke association in Linköping. The goal is to give stroke patients training and social interaction at the club between May and September.
C2.3 Employ fairly and safely, and provide career opportunities	C2.3.1 Ethical and legal employment, working conditions and professional development	<b>(Club management)</b> Follow all relevant national legislation and best practice for employment, health & safety etc	Free working clothes, employee locker rooms, lunchroom, personal protection equipment, and first aid is available. Lifting equipment (hydraulic car jack) are available in the workshop.  Employees are educated in the work environment legislation. They are involved and have an influence on how to manage and operate the facility.
<b>C3 Communications</b>			
C3.1 Engage golfers and members	C3.1.1 Communications activities that raise awareness and understanding amongst members and visitors	<b>(Club management)</b> Provide information on the facility's sustainability commitments, actions, or achievements	The club has informed members about the sustainability work through newsletters and at the annual meeting.  No information to external stakeholders is available on the club's website.
C3.2 Celebrate and promote sustainability	C3.2.1 Activities that raise awareness and engage people in the wider community	<b>(Club management)</b> Provide evidence of external communications and community engagement	The golf course with its biological values is a recreative nature space for the city's residents.  Students from the University area are engaged as members and by schoolwork.  The clubhouse area and its course are a great meeting point for nearby companies ' business meetings and networking.

			Big competitions with famous players raise the number of interested visitors to the club.
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## 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](http://www.sustainable.golf)