



GEO Certified®

GEO Certified® Report

Luxehills International Country Club

麓山国际乡村俱乐部有限公司

Prepared by Independent Verifier, Juming Zhang

Certified by GEO Foundation: October 2020
Valid until: October 2023

“Dotted with jagged hills, glittering and translucent lakes and streams, white sand bunkers, and ingenious rocks, and interwoven with French, Italian, Spanish, North American style villas and houses on the beautiful green land, it is deeply impressive that Luxehills Golf Course constitutes such a naturally harmonious community with golf and living in the place so close to the big city.”

Juming Zhang

GEO accredited Independent Verifier



Introduction

GEO Foundation is pleased to confirm that Luxehills International Country 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.

Luxehills International Country 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, Luxehills International Country Club should be awarded GEO Certified® status.

For the certification period stated above, Luxehills International Country 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.isealliance.org



Verifier's Report

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	Habitats, vegetation types, and species have been observed and confirmed during the site visiting. A small stream run down among fairways, along with native aquatic plants, representing small beautiful wet land. Many aquatic plants grow well in the

			lakes. Local trees, such as <i>Phyllostachys heterocycle</i> , <i>Ginkgo biloba</i> , <i>Magnolia grandiflora</i> , <i>Cinnamomum bodinieri</i> , <i>Osmanthus fragrans</i> , and ornamentals with good tolerance to shade, such as <i>Nephrolepis auriculata</i> , <i>Ophiopogon japonicas</i> , <i>Argyranthemum frutescens</i> , <i>Nandina domestica</i> are densely planted and grow well on roughs along real estate and highway, forming a noise proof hedge.
	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	No investigation of protected landscapes and species was carried out on the course. The club plan to invite a professional team to carry out the ecological survey, designate protected species and habitats and install facilities such as bird's nests.
	N1.1.3 Understanding and respect for cultural heritage	Protect any archaeological, historical or cultural designations on the site	No archaeological, historical or cultural heritage on the site.
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	Areas of turf grass maintained are confirmed while visiting the site. It is suggested that the maintained turf areas along the lakes, streams and roughs around tees reduced to the basic playing areas and replaced with maintenance free native grasses and aquatic plants.
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	Bird species and populations can be seen while visiting the site. It is proposed to establish buffer zone between far roughs and villa areas, roughs and water bodies with local native plants of maintenance free to decrease the maintained turf areas. Birds' nests is suggested to be installed after the ecological survey and ecological management.
N1.4 Conserve key species	N1.4.1 Practical conservation measures for priority species		No conservation measures for species and habitat are taken now. The club is committed to taking conservation measures after ecological survey.
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	The course is located in the transitional region. Cool season grasses, A1/A4 creeping bentgrass on greens and tees, Warm season grasses, 'Salam' Paspalum on fairways, 'Salam' Paspalum and native bermudagrass on roughs were used. Warm season grasses are adapted well to the local climate. A1/A4 creeping bentgrasses are more tolerant to heat, perform well from autumn through winter to spring, but need intense maintenances

			and inputs in summer to keep good landscaping and playing quality, which is justified from cost and profit.
	N2.1.2 Practices to maintain good soil structure and condition		Good innovation practices related with soil are taken as required.
	N2.1.3 Careful and responsible fertiliser application throughout the year to avoid over-fertilisation	Undertake soil tests and nutrient analysis	The soil is tested annually by professional soil lab. Fertilizers are applied according to the soil test.
N2.2 Prioritise mechanical maintenance	N2.2.1 Non-chemical pest, disease and weed management	Sharpen mowing blades; Remove surface moisture; Hand weeding	The machinery workplace was visited. There are various machines in good working condition to satisfy turf maintenance requirements. Weeds are largely controlled by mowing regularly and hand weeding of malignant weeds is occasionally performed on fairways and semi-roughs.
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 superintendent made maintenance programmes according to the climate, turfgrass species and pest occurrence pattern over different seasons. The superintendent scouts the course daily to find early signs of pests and disease. Only minimal use of chemicals is used at early stage of pests and diseases.
	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	All required aspects were observed and confirmed. Only registered, approved and licensed chemicals are used with appropriate equipment according to usage instructions.
N3 Pollution Prevention			
N3.1 Prevent pollution across the entire site	N3.1.1 Practical measures to ensure pollution risks are minimised from golf	Document procedures for emergency spill responses; Maintain mowing buffer zones around water and all ecologically sensitive areas;	All required aspects have been confirmed. It is suggested that buffer zones be established along the house property and lake in far roughs.

	course operations	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.	
	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	All requirements have been confirmed.
	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	All requirements have been confirmed and appropriate infrastructure and facilities such as cement washing surface are present within the superintendent complex.
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; 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	All requirements have been confirmed and appropriate infrastructure and facilities are present within the superintendent complex. Safety attention signs about hazardous substances and emergency equipment are posted up on where they are placed, stored, and handled.
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)	All requirements have been confirmed. The machinery wash is on cement ground. Machinery wash water is collected in sedimentation tank, and settled for a certain time, then discharged into the municipal mains sewer to mitigate introduction of pollutants into sewer lines and groundwater.

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	Irrigation water are 100% from the lake of the course collecting surface water from the area's plentiful rainfall. Only on greens, tees, fairways and semi-rough are irrigated while far roughs and natural vegetation are not.
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; Ensure irrigation schedules are informed by weather patterns and soil moisture analysis	The pumping system, sprinklers working condition and control systems are daily checked and well maintained. Electromagnetic valves and sprinklers can be controlled by mobile phone of irrigation technician according to weather, soil moisture and turfgrass condition. Training and awareness raising on water savings are given to all maintenance staff at times.
	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	All requirements have been confirmed. The clubhouse and maintenance buildings are 100% supplied with potable water. Water-saving fixtures, including low-flow faucets at sinks and showers and low-flush toilets, were installed in all facilities. Records from water bills are kept for tracking total use.
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	Not applicable.

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	All green mowers are electrical driven type. Replace lead-zinc batteries with lithium batteries gradually. The Low maintained areas have been developed with shade tolerant ground cover plants, such as <i>Nephrolepis auriculata</i> , <i>Ophiopogon japonicas</i> , <i>Argyranthemum frutescens</i> , <i>Nandina domestica</i> along house property where shade is severe resulting from denser trees. It is
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			suggested that natural vegetation buffers be increased along water bodies.
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	All requirements have been confirmed.
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 club has used LED energy saving lights at the clubhouse. The club made the commitment to explore other available/feasible renewable energy sources.
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	The club prefers to purchase recycled and locally sourced materials. Re-used printed paper are reminded and encouraged at the office.
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	All requirements have been confirmed. The club prefers to purchase certified and approved by the government and environmental friendly local products.
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	All information have been confirmed. Abandoned tee mats from driving range are used on the road onto tees. A separate recycle waste bin/area for these materials has been set up in the club and golf course according the local government regulations.
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	All requirements have been confirmed. Recycle waste materials are collected and treated periodically by a local contracted professional waste recycling company licensed by the government.

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 club has hosted different activities related with golf. For example, In 2008, the club hosted "9th national golf club general manager fraternity". Nearly 500 people from 200 golf clubs and news media gathered to discuss the theme of "social responsibility of golf enterprises for the healthy development of the golf and golf positive role in promoting influence on the society. The club hosted a number of golf events including the 2011 the 17th VOLVO China, the 2015 Infinite Junior Golf Tour (IJGT), the 2018 HSBC Junior National Golf Championship, and so on. Those golf events not only provides a platform for kinds of golfers to develop their potentials, but also provides a platform for children to learn golf.
C1.2 Provide for volunteering and charity	C1.2.1 Opportunities available for volunteering and support of charities and good causes		The club supports a range of charity activities. Along with China's social welfare foundation, the club has raised more than a hundred thousand USD through Charity Golf Matches to provide "3 yuan happiness free lunch" for students and living subsidies for teachers in mountainous village schools, build three "caring kitchens" for primary schools, and provide, and establish the "Golf Stars of Tomorrow Fund" to support the youth golfers development in China. The club provides about 20 interns in golf major and turfgrass major from local vocational colleges and universities every year.
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'	The club keeps good relations with the community through the golf. The club provides golf teaching experience activities for property owners all year round, invite the community and outside kids to participate in golf activities, such as parent-child competition, youth competition, and competition on Christmas carnival day and so on.

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 club provides the quality services for members and good wellbeing for staff. The matches between members are held on regular occasions. For the staff the club provides rooms with the necessary facilities. All staff enjoy birthday, holiday gifts from the club. The club organize different parties on holiday to enrich staff daily lives every year.
C2.2 Be open and inclusive	C2.2.1 Inclusivity and diversity in membership and visitor policies	Demonstrate inclusive policies for members and visitors	The club hold different golf matches for different kinds of people, such as the old, kids, women, and business professionals, amateur and so on to increase diversities of the club members and social influences of golf.
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	The club hire staff regardless of ethnicity, gender, or age. The staff room and were well equipped and maintained. All employees have to participate in yearly seminars on emergencies management with exams and operations.
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	Keeping a good relations among golfers, members, visitors and the club is a top priority for the club. The club's sustainability commitments, actions, or achievements are informed through newsletters, notice boards & poster display, website and the social media site.
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	The club follows the local policies and regulations with water management and environmental departments of local government and receives irregular on-site inspection on the use of pesticides, sewage discharge and purification, noise control, etc. to take the responsibility of environmental protection and sustainable development. Thus, the club has been awarded numerous honors, including 2016-2017 TOP100 GOLF COURSES IN CHINA: CHINA TOP 10 GOLF COMMUNITY, 2017 Course Committee of China Golf Association: Top 10 Golf Club, 2017-2018 CHINA TOP 10 : CHINA TOP 10 GOLF COMMUNITY, 2018-2019 TOP100 GOLF COURSES IN CHINA: CHINA TOP 10 GOLF COMMUNITY, 2019 TOP100 GOLF COURSES IN ASIA, and 2019GOLF CHOICE:TOP 10 MOST OUTSTANDING GOLF COURSES.

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