



GEO Certified®

GEO Certified® Report Loch Lomond Golf Club

Prepared by independent verifier: Bob Taylor

Certified by GEO Foundation: 2023
Recertification due: 2026

GEO Certified®

 **GEO
Foundation**
Sustainability in and through golf

“Loch Lomond is an amazing complex set within a stunning landscape. It is not the easiest of golf courses to manage given the annual weather conditions experienced but, it is the provision of the golf course that has allowed the restoration of the estate including the historic and cultural elements that were so in need of restoration. Golf at Loch Lomond is now preserving the historical interests whilst ensuring the conservation of the natural features. All involved at Loch Lomond are aware of the sensitivities of the site and are working hard to ensure all sustainability and ecological interests are both recognised and addressed. Therefore, Loch Lomond’s Sustainable Golf OnCourse accreditation is fully justified and deserved.”

Bob Taylor
(GEO accredited independent verifier)



Introduction

GEO Foundation is pleased to confirm that Loch Lomond 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.

Loch Lomond 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 (CIP) set for the future, Loch Lomond Golf Club should be awarded GEO Certified® status.

For the certification period stated above, Loch Lomond 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

Carole Kerrey
Manager, Data and Reporting, GEO
Certification Ltd.



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	Understanding of the site is based on greenkeeper knowledge rather than on survey data. A biodiversity audit undertaken on behalf of the R&A in 2022 gives context to

			the importance of the site and the designations that apply. It will also be followed with 5 years of wildlife monitoring (2022 to 2026). CIP Bring together in one file: all the relevant statutory and non-statutory information relating to the designations and the reasons for notification and how the management objectives being met on the surrounding. The club has sporadic information in wildlife surveys for planning (by Envirocentre), which includes surveys from when looking to impart management in areas of the peat land. CIP: Use the above to enable the production of a directed management plan detailing the ongoing management of the site in light of the wider landscape management objectives.
	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	The above would help the club better understand its legal obligations and how to manage this protected landscape. All larger trees have been surveyed and recorded using individual tree tags. CIP develop a central folder for all survey data to make it more easily accessible for review and use. Include the relevant information on the position of and management for rare and vulnerable wildlife. Include here the rare Loch Lomond dock and lungwort. CIP: undertake at least one specific wildlife survey every year over the next 5 years to build knowledge of species using the site. Include: botany, invertebrates (broad survey), birds, and aquatic species. Continue in house building the species listings with location of the fungi. Others of benefit would include small mammals and reptiles. Lichen surveys are carried out 3 yearly by NatureScot.

			The club recognise the areas of ancient woodland (management objectives assigned). Review the management plan and update periodically to ensure future ancient woodland conservation interests are met.
	N1.1.3 Understanding and respect for cultural heritage	Protect any archaeological, historical or cultural designations on the site	Cultural heritage is one of many areas in which the golf club is very strong. It is an area where massive interest and intervention has been given. I understand the site supported significant landscape and historical interest well before the golf course and whilst this is true it has been the golf course that provided the much-needed catalyst to enable cultural and historic restoration works, all of which would never have been possible without the provision of the golf course. The golf course has enabled the full and wholly sympathetic renovation of Rhosdu House The original Calqhaun estate house, the home of over 30 of the estates Lairds. The renovated Founders room within the house houses the original paintings of all past to present Lairds. The derelict chapel (final family resting place for all 32 generations of the estates Lairds), the old carriage house, the walled gardens and the old dairies, have also been fully renovated. This work is ongoing with other buildings to be brought back from their dilapidation. The landscaped grounds are recognised as being in part enabled by Capability Brown and are being preserved in line with the original landscape interests.
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	The greenstaff monitor course usage regularly. This indeed was brought into focus during the recent drainage and sand capping works, enabled by GPS and spray mapping information.

			CIP: continue to execute annual course usage mapping to fine tune in play areas and, importantly, maximise possible increases in naturalised rough. A fringing rough managed for ball retrieval and play would also provide a buffer to the off-line rough. This should be developed under guidance where possible.
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	The golf club are still working to an agreed management plan that covers the entire course. However, this is out of date and does need to be updated. CIP renew the management plan for the golf course, giving particular focus to the points raised in N1.1, N1.2 and N1.3 and 1.4. The existing management plan covers in great depth grassland management tree and shrub management and Rhododendron control. CIP: Develop a specific Invasive Non-Native Species management control plan focusing specifically but not exclusively on the rhododendron.
N1.4 Conserve key species	N1.4.1 Practical conservation measures for priority species		The greenstaff are aware of identified priority species including the rare Lungwort lichen and Loch Lomond Dock. The club is aware of their locations. They also point out with enthusiasm that Osprey and Barn owl are both successfully nesting on the course. The greenstaff have a close working relationship with the National parks re. management. This has recently included piping a number of ditches to enable peat conservation. CIP: develop a more structured nest box / nest site programme including provision for larger raptors and owls. Number and map nest box locations and monitor success. I would be pleased to discuss this further with the club upon request.

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 greenstaff and particularly the course manager, are experienced in turfgrass management. This is necessary here possibly more than elsewhere given the difficulties of the site with respect to maintaining and perfecting turf quality. The greens of Poa and bent are regularly over sown with bent to offer greater wear resilience and to maintain a stronger winter cover. Fairways of ryegrass and bent are similarly over sown with bent. The bent grass gives some offset to anthracnose which is a main disease. The greenstaff are using grass seed that is best suited to the climate and ground conditions. Poa is always going to be a problem to be managed.
	N2.1.2 Practices to maintain good soil structure and condition		Loch Lomond annually receives in excess of 2m of rainfall, often experiencing more than 200mm / month. To manage under such circumstances the course has been further drained with sand capping. Greens have been constructed to USGA spec. Maintenance is centred on sensible aeration and grooming throughout the playing season to avoid undue disturbance to the turf. The greenstaff understand the need to avoid more aggressive management that, here, would lead to a more rapid decline in turfgrass quality.
	N2.1.3 Careful and responsible fertiliser application throughout the year to avoid over-fertilisation	Undertake soil tests and nutrient analysis	The club were keen to detail their controlled release fertilizer programme, which is geared to avoiding overuse and lush grass growth. Applications are timed and provided in relation to turf condition, ground and weather conditions. The main programme may be supplemented, if required, using soluble feeds with a growth regulator. The programme is geared to providing a balance of macro- and micro-

			nutrients. Actual need is determined using clipping yield data.
N2.2 Prioritise mechanical maintenance	N2.2.1 Non-chemical pest, disease and weed management	Sharpen mowing blades; Remove surface moisture; Hand weeding	General mowing and maintenance practices are fully understood and adhered to. All mowers are checked daily by the mechanic. Switching and brushing is carried out as need dictates with light aeration and grooming to avoid unwarranted disturbance. Leather jackets remain the main pest problem. Areas of likely infestation are recorded regularly. Anthracnose is the main disease as indicated below.
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	Anthracnose is a serious problem that has caused issues in the past. Significant reductions in disease severity are now being seen as a result of using preventative control means. Chemicals are used from June to September to reduce disease incidence through the winter periods. The current programme is working very well.
	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 .	Greenstaff carry out daily scouting for disease symptoms during the critical periods of each year. The club take advice from The R&A Agronomists and other plant pathologists. The club have also set up a study group to research the problem issues. Moisture checks are carried out at regular intervals and changes in temperature and rainfall are all recorded. Loch Lomond golf club have engaged a very experienced greenkeeping team that are very experienced in spray management. 5 staff are fully trained and licenced in spray management. A data log is kept and is uploaded to ensure up to date record keeping. I also evidenced the wetting agent log. All containers are collected as need dictates by a licensed operator. All areas of spray mixing and area of storage were

			clean, tidy and free of obstruction signage. Where required ventilation was noted, discussed and deemed compliant.
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 club have adopted and are working to a pollution prevention policy, covering all aspects of spray use. The policy is particularly focused on management around and in the vicinity of the water bodies. Spraying is carried out only under favourable conditions following LERAP guidance. A chemical spill procedure is in place. Drainage is geared towards sustainable drainage principles of settlement before issuing out into water bodies. The spray management system is recorded on the “One Time Face Page” app.
	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 staff are engaged in COSHH training with refresher courses undertaken annually. All chemicals are stored appropriately in a locked chem safe unit, which is signed and free of obstructions. Spill equipment is stored close by.
	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 chemicals are mixed for use on the designated wash down pad. All staff are given regular training on chemical use which includes mixing and spill prevention. All activities around spray use are recorded on “One Time” App. CIP: the infrastructure supporting all machinery and chemicals is becoming somewhat cramped. This could lead to accidents, and I therefore urge you to carry out a feasibility of your requirements with a view to compartmentalising all areas and enabling continued safe access and use. This should include areas of storage

			mixing and staff welfare. Please undertake feasibility within the first six months of verification renewal and complete actionable works by next assessment.
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	A procedure for working in and around Water Bodies Guidelines is located on the Club's integrated Compliance and Training platform, Obbi Golf. This same platform also houses the Emergency Spill. Procedure. Furthermore, the Emergency Spill Procedure and Water Bodies Guidelines are displayed in each department. These cover legislative requirements and procedural guidelines that must be followed. I noted Emergency Spill Kits located in the kitchens, greenkeeping compound, Colquhoun Lodge and the Spa. Loch Lomond have a designated area containing a mixing tank. Fuels are stored in purpose-built storage containers. A purpose-built chemical safe and locked paints store are in place. An emergency shower and separate hand-washing facilities are in place for spray technician, All equipment is inspected annually.
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)	The club have a large waste to water unit sat on a large concrete pad. This is quite old but is functional. All machinery is washed on the pad with no wash off noted leaving or migrating from the pad. The club have a discharge license in place

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	CIP: include feasibility for responsible capture and storage of storm waters for use with N3.1.3 above.
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	Loch Lomond have an installed weather station. Graphs are provided to show weekly water use (GEO website). Water is largely sourced from the loch, with mains back up if required. Meter readings are taken weekly. The greenstaff were keen to point out that water is used as need dictates and that they are experienced in its careful use. Daily checks are made to assess application and timing needs. Irrigation system is serviced annually.
	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	The club are currently (at the time of my assessment), installing individual water meters in all facilities to allow more detailed and accurate pinpointing of water use. CIP: by next audit ensure all areas have a meter installed. CIP: encourage towel reuse in all bedrooms to reduce water consumption.
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	Water is sourced from the loch under license for irrigation needs

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	The club in completing their drainage scheme looked very closely at the extent of in play areas. Mapping is available showing which areas are important for play and which are
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			being left for conservation. This process is continued through regular monitoring by the greenstaff. The greenstaff are monitoring players use on the course and are keen to continue reducing management intervention where this can be realised.
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	A feasibility study has been completed for the Point accommodation, The glass houses and the Spa, covering alternative and optimal energy conservation measures. The results are being adopted on an ongoing and phased basis through all areas of the facility. CIP: all areas should be adopting up to date energy conservation management policies by next audit. The Colguhon Lodges are now fitted with a monitored heat and power unit which is proving very efficient and effective. Bills on electricity use have reduced almost 10-fold. Oil fired boilers in Rhosdu house are being replaced in 2023 with CHP and 2 LPG back up boilers CIP: replacement by October 2023. Of significance at Loch Lomond is the fact that the Maintenance manager secured a fixed electricity price guarantee pre-price hikes which runs to 2025. This will save around 247K
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	CIP: all areas should be benefiting from the up-to-date energy conservation management policies being phased in by next audit.
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 work to a very detailed waste plan (as uploaded). This covers in depth material purchase use and disposal demonstrating quite effectively how waste is segregated and disposed. Waste in all its forms is covered under all staff induction and training.
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	See in depth waste management policy uploaded as evidence.
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	See in depth waste management policy uploaded as evidence.
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	As uploaded to GEO platform.

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		Recreational activities are member exclusive but are wide ranging . These include: country pursuits such as clay shooting, fishing, hill climbing, mountain biking to

			occasional falconry days and archery. The club delivers 4X4 driving training and partake in the highland games. Weddings are important for members and guests. Staff and their families can enjoy the spa and the country events. The club also host a christmas market.
C1.2 Provide for volunteering and charity	C1.2.1 Opportunities available for volunteering and support of charities and good causes		The club employ locally, normally from within a 10-mile radius. On the course loch Lomond will promote workplace opportunities if and when available. CIP: develop a policy for volunteer opportunities to benefit local areas.
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'	Loch Lomond is a member only club and, whilst all facilities are available to all employees, the benefits of the facility do not extend outside the membership and employee network.
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 members and all employees have access to all health and fitness facilities within the club.
C2.2 Be open and inclusive	C2.2.1 Inclusivity and diversity in membership and visitor policies	Demonstrate inclusive policies for members and visitors	Loch Lomond is an exclusive member only club, but access is provided to all family membership relations. This in itself offers major opportunities for all country pursuits through to health fitness and general well-being. In addition, the club are keen to promote Women in Golf through the now formed Women in Golf Charter set up by the club in 2022. Its objective to promote diversity on behalf of all who serve 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 are keen to employ from the local area wherever possible. A very detailed induction portfolio is provided and is to be followed by all staff.
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	Coaching opportunities with spa events, dining, boating and country pursuits CIP: consider awareness raising, such as creating a sustainability section 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	Provide evidence of external communications and community engagement	CIP: consider communicating with, and hosting events for, charities.



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