



GEO Certified®

GEO Certified® Report Sentosa Golf Club

Prepared by independent verifier Brad Revill

Certified by GEO Foundation: 2025
Recertification due: 2028



"Sentosa continues to impress with its long list of environmental stewardship and sustainability initiatives, underpinned by a highly structured and data-driven approach to managing nature, resources and community engagement.

From protecting a unique coastal mangrove habitat and supporting coral regeneration through targeted shoreline stabilisation, to establishing native bee colonies and delivering education programmes with schools and universities, the club is showing real leadership and ambition.

This is matched by strong performance in resource efficiency, including advanced irrigation monitoring, significant reductions in managed turf areas, and a commitment to carbon neutrality with ambitions to go further.

Looking ahead, it will be exciting to see the impact of their next phase of initiatives, including expanded habitat naturalisation, renewable energy adoption, and further integration of their sustainability efforts across the wider Sentosa island community."

Brad Revill
(GEO accredited independent verifier)



Introduction

GEO Foundation is pleased to confirm that Sentosa 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.

Sentosa 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 and Critical CIP's (CCIPs) to be reviewed at recertification, Sentosa Golf Club should be awarded GEO Certified® status.

For the certification period stated above, Sentosa 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
Director, Certification and Credibility,
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 – 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



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	General knowledge of the wildlife and habitats on the site	The club has had an in-depth biodiversity study completed and accurately identified the types of habitats present, and their relative size. Highlight: The club have created bird identification cards for all the birds that have been identified on the course to share with golfers and guests. These are of high quality and very informative.
	N1.1.2 Knowledge of legal designations for protected areas, habitats and species	Identify rare, protected or endangered species found on the golf course; Understand legal responsibilities for landscape protection and special area designations, if applicable	No threatened or protected animal species identified on site yet. There is a unique coastal mangrove habitat with mangrove tree species that are only found on this site, and not anywhere else in the country. The club works closely with universities and environmental protection agencies and has also completed lake bank stabilisation projects to help protect this area. Highlight: An intertidal survey was completed in 2023 which listed species of coral and other animals present in the tidal zones of the property. This was shared online as a blog post, highlighting the progress made on coral regeneration since 2018.
	N1.1.3 Sound understanding and respect for cultural heritage	Protect any archaeological, historical or cultural designations on the site, if applicable	Multiple WW2 structures and battle locations are present on site. The club has protected them and highlights their significance through signage and historical photographs. Some structural restoration is also in process, plus clearing of overgrown jungle to reveal the structures.
N1.2 Opportunities to naturalise the golf course	N1.2.1 Measures taken to identify and minimise the required area of managed turfgrass	Monitor patterns of play to identify underutilised areas of turfgrass	Several areas were discussed for naturalisation during the visit and examples of native grasses that could be used. CIP: Please begin planting out of play areas with native grass species.

	N1.3 Actively create and manage habitats for wildlife	N1.3.1 Projects to create and manage habitats in the best way for wildlife and golf	Prioritise native species of varying size and structure when planting Prioritise native trees and shrubs when planting Prioritise native aquatic species of varying size and structure when planting Establish mowing buffer zones next to water bodies and wetlands	Native bee colonies have been established on site in 2 different locations with plans on expansion. Bird nesting boxes are constructed and placed as part of a program developed with local schools. Spraying buffer zones are in place around protected wetlands and coastal areas. No formal environmental management plan is in place. CIP: Please combine all individual plans into one management plan to simplify training and communication.
	N1.4 Conserve key species	N1.4.1 Practical conservation measures for priority species	Follow local best practice to protect or attract endangered, protected or rare species found on site	A large coral population is located in the tidal areas of the property, as well as a species of mangrove tree that is not located anywhere else in the country. A stonewall has been constructed around the coastal areas of the course which resulted in a dramatic reduction in sediment and an increase to endemic coral populations.
	N2 Turfgrass			
	N2.1 Maintain optimum turfgrass and soil health	N2.1.1 Appropriate turfgrass varieties adapted to climatic and other geomorphological factors	Select appropriate grass species for the climate	The grass species on the greens is TifEagle Bermuda (Cynodon dactylon x Cynodon transvaalensis); the tees consist of Seashore Paspalum (Paspalum vaginatum); the fairways and rough consist of Zoysia matrella. All turfgrass species listed above are well suited to the climate. The club is aware of the environmental challenges vs the need to provide turf surfaces for play and actively manage this aspect.
		N2.1.2 Practices to maintain good soil structure and condition	No specific international requirement, however, identify course management and agronomic activities and look for continual improvements	Organic bio-stimulants like seaweed, biochar are used on site. Compost from the bio-digester is used around the property in landscape areas. Regular aeration is performed to maintain good soil health and structure.
		N2.1.3 Careful and responsible fertiliser application throughout the year to avoid over-fertilisation	Test and monitor soil pH; Follow legal requirements when timing fertiliser applications	All equipment is regularly calibrated for chemical and fertiliser applications. Appropriate PPE is in stock and used by all applicators.

		Ensure staff are fully qualified to use fertilisers Ensure staff use appropriate protective equipment Regularly calibrate and test applicators	No soil samples have been taken and analysed for soil nutrient availability since 2020. CCIP: Please analyse soil samples for nutrient availability once per year at a minimum. There is significant potential improvement in terms of fertiliser use reduction.
N2.2 Prioritise mechanical maintenance	N2.2.1 Non-chemical pest, disease and weed management	Sharpen mowing blades; Remove surface moisture; Change hole locations frequently	The club has invested in 2 sets of new reel and bedknife grinders to ensure mowing blades are kept sharp, providing the highest quality of cut. Hole locations are changed daily to distribute wear. The club is actively using Biochar and seaweed extracts to build soil biology to help prevent turfgrass diseases and reduce fertiliser inputs.
N2.3 Use chemicals responsibly	N2.3.1 Application of chemicals only when necessary to prevent or cure defined / identified turf health issues	Identify and track pest and disease hotspots, including sensitive areas Scout the course daily for early signs and symptoms Accurately diagnose to determine the cause of weeds, pests and diseases	No formal thresholds for pest/disease activity. Due to the club's goal for consistent high maintenance standards, a preventative program for disease control is in place year-round.
	N2.3.2 Application of chemicals with full safety precautions	Use legally registered and approved products; Prefer products for the specific weed, pest or disease; Follow legal requirements; Ensure staff are fully qualified to use pesticides; Ensure staff use appropriate protective equipment; Regularly calibrate and test applicators; Dilute and dispose of leftover product on untreated areas of amenity turfgrass	Most products are legally registered for turf use. Some agricultural products are present, but they share the same active ingredient as turf registered products. Leftover product is sprayed on the driving range. Spraying equipment is in good working condition and are clean and free of residue. Equipment is regularly calibrated and maintained.
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 ; Retain no-spray/no-spread buffer areas next to water bodies and wetlands; Retain no-spray/no-spread buffer zones in and around ecologically sensitive areas	Emergency spill kits and spill response plan in place and easily accessible. CIP: Buffer zones are in place but could be more easily identified by visually mapping them.
		N3.1.2 Practical measures to ensure pollution risks are minimised from clubhouse operations	Formal wastewater discharge agreement, if applicable	Wastewater discharge agreement is in place. Discharged to municipal sewer.
		N3.1.3 Practical measures to ensure pollution risks are minimised from maintenance facility operations	Wash machinery over an impermeable, leak-free surface; Mix and load pesticides and fertilisers over an impermeable, leak-free surface; Triple rinse pesticide containers and applicators	Mixing area is isolated with drainage to a separate tank which is pumped out and disposed of by a licensed contractor as per the national regulations. Containers are triple rinsed after they are emptied. These are disposed of by a licensed contractor.
	N3.2 Safely manage hazardous substances	N3.2.1 Legal compliance in the storage, handling, application and safe disposal of all hazardous substances	List of hazardous substances, made available to authorised staff; Product and material data safety sheets; Well ventilated concrete or metal building; Impermeable, leak-free flooring; Sufficient storage capacity; Spill containment kits; Secondary containment e.g., bunds or drip trays; Emergency wash area, as per local requirements (body shower and / or eye wash station); Hazardous substances safely collected by a registered company or body ;	The emergency shower is not functional, and a replacement has not been installed yet. There is a PO approved and uploaded to the Oncourse library. Current storage is secure and well-ventilated with hazardous products separated and further secured as per regulations. Flooring is concrete and shelving is steel. There are MSDS records stored at the storage area as well as the office. CCIP: Please install “drip trays” under chemical storage shelving to contain any potential spills.

		Follow any additional legal requirements	
	N3.2.2 Legal compliance in the storage and handling of fuels and gases	Tank secured to a horizontal, flat, non-combustible surface; Secondary containment of fuel in the event of spills e.g. bunds and drip trays; Inspection of storage tank(s) at least quarterly, if required; Fire extinguisher in the immediate area	Storage tanks (underground) are inspected by a registered and licensed company every 3 years as per the national regulations. Fire extinguishers and spill kits are in place. Emergency response procedures are well documented and easily accessible. No bunding or oil/water separator are installed. There is a risk of spills or residue entering the nearby stormwater drain (10m away). CCIP: Please install secondary containment, in the form of bunding, around the fuel pumps and filling area to prevent any spills from washing into the nearby stormwater drain.
N3.3 Responsibly manage waste / storm water	N3.3.1 Appropriate wastewater usage, treatment and discharge	Impermeable, leak-free surface; Treatment as per local requirements (oil, grease and / or clipping separation); Formal discharge agreement, if applicable	Isolated machinery wash bay with clipping catchment is in place. Impermeable concrete surface.

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	Select appropriate grass species for the climate e.g., drought and disease tolerance; Target irrigation to essential playing surfaces; Prioritise native, drought tolerant species for landscaping and planting	The Zoysia species present, while not the most drought tolerant of grass species, are well suited to the Singaporean climate. Drought tolerant species are not taken into consideration for landscape plants due to the frequency of rainfall in this climate. Plants that perform well in this climate are still chosen, however.

R1.2 Maximise water efficiency	R1.2.1 Practical measures to use water more efficiently on the golf course	Schedule irrigation based on informed assessment of soil moisture and weather forecasts; Evaluate new irrigation technologies e.g., central control, precision sprinklers etc.; Provide staff training on efficient irrigation practices; Adjust sprinklers to playing surfaces only	Soil Scout moisture sensors are installed to observe trends in moisture content after irrigation and rainfall. They are used to make adjustments to programming to further improve efficiencies. TDR and USGA portable soil moisture probes are in use across the property. Part circle sprinklers are installed along all water bodies to prevent contamination and reduce wastage.
	R1.2.2 Practical measures to use water more efficiently in buildings	Monitor and record water consumption (bills, flow meter etc.); Encourage water conservation practices amongst players and staff	Accurate recording of all water use is in place. The electrical and water consumption of clubhouse equipment is considered as part of the purchasing approval process.
R1.3 Source water responsibly	R1.3.1 Measures towards alternative, lower quality sources of water	Water abstraction permit, if required; Report water consumption to environment agency, if required	Confirmed. Reports are sent on a monthly basis.
R2 Energy			
R2.1 Reduce energy demand	R2.1.1 Measures to reduce the amount of energy consumed in golf course maintenance	Naturalise non-playing areas to reduce mowing and other energy intensive inputs	As part of the course re-design, fairway size was reduced by 30%. Areas for naturalisation were observed and discussed with management during the visit, with examples of native grass types provided.
R2.2 Maximise energy efficiency	R2.2.1 Measures to use energy and fuels more efficiently in buildings	Monitor and record energy consumption (bills, meters etc.)	All records are regularly updated and checked against previous years. All lights have been changed to LED and resource efficient equipment is used when and where available.
R2.3 Source energy responsibly	R2.3.1 Measures to source alternative, renewable forms of energy	Understand the energy mix of your electricity supplier; Explore possible greener energy providers	The club is actively looking into adding solar panels to the clubhouse roof. There is a trial installation in place on top of one of the buildings and is currently being assessed for viability. The club achieved Carbon Neutral in 2021 and plan to be carbon positive in the future.
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	No specific international requirement, however, identify activities to reduce the demand for materials and look for continual improvements	All packaging, water bottles and pens are made from recycled or biodegradable materials. Food waste has been eliminated using an on-site composting machine. Waste materials are logged by type and location and reviewed on a regular basis.
R3.2 Purchase responsibly	R3.2.1 Commit to sustainable purchasing practices	Favour responsible, lower impact products	Seasonal fruit, veg and meat is used in the club restaurant. All packaging, water bottles and pens are made from recycled or biodegradable materials.
R3.3 Reuse and recycle	R3.3.1 Waste stream separation for maximum recycling and re-use opportunity	Put in place a recycling separation system, according to local rules and availability; Clear, simple and visible bin signage; Monitor and record weight of waste for each stream e.g. invoices, bills etc.	Data logs and charts comparing data month to month and year to year are in place and separated for each stream. Data is reviewed monthly for inconsistencies. Public facing bins are clearly labelled and colour coded. Waste separation is also performed back of house and stored in labelled bins at the waste storage area.
R3.4 Demonstrate legal compliance	R3.4.1 Compliance with all local and regional waste management regulations	Authorised waste collector for general, hazardous, industrial and green waste, if required	Confirmed.

COMMUNITY			
<u>C1 Health & Wellbeing</u>			
Objectives	Requirements	Mandatory Practices	Verifier Notes
C1.1 Improve health and wellbeing	C1.1.1 Benefits to human physical and mental	Plans in place to respond to incidents and emergencies	Resident golf pro on-site who works with members to promote golf fitness.

	health from golf and facility activities		Utilise their in-house magazine to promote the benefits of golf. There is an emergency response plan in place. The playing environment and working conditions observed looked safe and free from obvious hazards. CCIP: Please create and review risk assessments annually.
C1.2 Be open and inclusive	C1.2.1 Inclusivity and diversity in membership and visitor policies	Membership policies free from discrimination across age, gender, sexual orientation, religion, and ethnic background	No discrimination is in place for selection or admittance to the club, either for member or guest.
C1.3 Employ fairly, safely and provide career opportunities	C1.3.1 Ethical and legal employment, working conditions and professional development	Adopt an equal opportunity recruitment and hiring policy; Follow all relevant legislation and best practice for hiring and employment; Follow all relevant legislation and best practice for worker safety	All working conditions observed looked safe and free from obvious hazards. PPE was in stock and being used on a regular basis. Training is provided to team members regularly with additional training provided to those identified as requiring extra development or for specialised positions.
<u>C2 Outreach & Inclusion</u>			
C2.1 Diversify access and provide multifunctionality	C2.1.1 Social and recreational activities at the facility	No specific international requirement, however, identify multifunctional activities and look for continual improvements	The club hosted a sustainability awareness and educational seminar for industry professionals during one of the LIV Golf events held at the club. There are regular bee and pollinator educational sessions being held at the club at their resident native bee apiary. Students and university professors gain access regularly to assess the unique habitats and environment present on the property.
C2.2 Provide for volunteering and charity	C2.2.1 Opportunities available for volunteering and support of charities and good causes	No specific international requirement, however, identify activities to support volunteering and charity and look for continual improvements	Volunteer programs in place for tournament preparation. Support the ARC Children's Centre.
C2.3 Establish active community partnerships	C2.3.1 Positive and constructive engagement with neighbours, the	No specific international requirement, however, identify partnerships and community	Sentosa Golf Club has influenced the entire island of Sentosa to the point where they have developed a ONE SENTOSA community drive with goals and a vision to improve the whole islands green footprint.

	local community and other groups	activities and look for continual improvements	There is now a sustainability board for the whole island of Sentosa, not just the golf club.
C3 Communications & Advocacy			
C3.1 Engage staff and golfers	C3.1.1 Communications activities that raise awareness and understanding amongst members and visitors	Involve staff and committees in sustainability efforts; Involve golfers in sustainability efforts; Post sustainability information in the clubhouse and / or on the golf course	In-house magazine brand which communicates all sustainability achievements and commitments; social media also echoes this. Industry bodies share articles relating to the club's achievements and commitments.
C3.2 Celebrate and promote sustainability	C3.2.1 Activities that raise awareness and engage people in the wider community	Share at least 3 Highlights on sustainable.golf	A highlight for their new large bio-digester was shared along with 2 highlights from LIV during the 2024 golf event held at the club.
C3.3 Follow a journey of continuous improvement	C3.3.1 Measures to help track, review and improve sustainability and climate action	Put measures in place to ensure that OnCourse can be updated annually	Sentosa has a dedicated Sustainability Manager in place who is also responsible for the handover if they were to resign.

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