



GEO Certified®

GEO Certified® Report Forest City Golf Resort

Prepared by independent verifier Brad Revil

Certified by GEO Foundation: 2024
Recertification due: 2027

GEO Certified®

 **GEO
Foundation**
Sustainability in and through golf

“Forest City Golf Course has made commendable strides in embracing sustainable practices, demonstrating a clear commitment to environmental stewardship and continual improvement. From reducing turfgrass areas and trialling native species to implementing water-efficient irrigation systems and initiating wildlife habitat projects, the facility showcases a thoughtful approach to ecological responsibility. I am looking forward to seeing their habitat management and community outreach plans develop over the coming years.”

Brad Revil
(GEO accredited independent verifier)



Introduction

GEO Foundation is pleased to confirm that Forest City Golf Resort 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.

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

For the certification period stated above, Forest City Golf Resort 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.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	Map all habitats and vegetation types on the site; Regularly update landscape / biodiversity surveys	I was shown a habitat map and species list which had been started but does not cover all the habitats on site.

			We discussed the proper identification of habitats and how to display them on the map. A list of animal and bird species had also been started. CCIP: Please complete the habitat map as discussed, clearly identifying all habitat types on the property, and immediately surrounding the property.
	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 surrounding area is classified as a Ramsar Wetland which is currently managed by the state forestry department (see associated file). As mentioned above, the species list has been started but is not yet complete. They understand their legal responsibilities for safeguarding the surrounding wetland and ocean habitats. The project was under much scrutiny from the local authorities and local communities during the development phase. CCIP: Please complete the species list, highlighting any endangered or threatened species found on site.
	N1.1.3 Understanding and respect for cultural heritage	Protect any archaeological, historical or cultural designations on the site	N/A
	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
			On the Legends course, the turf is surrounded by sandy waste areas and out of play areas are already sandy waste areas. However, they are actively trying to reduce the width of the turf surfaces where possible to increase the size of the waste areas and reduce turfgrass. On the Classic course, they are adding landscape into select out of play areas but in a limited capacity as the landscape theme on this course is higher maintenance.
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	There is currently no habitat management plan in place. We discussed what would be involved in creating a management plan document while I was on site. They currently have a plan to install 40-50 bird nesting boxes across both golf courses in 2024. The project had not started yet as of the time of my visit.

			Each year they plant approximately 1,000 mangrove trees in the surrounding wetland areas. 1,200 trees were planted in 2023 with the same goal in 2024. Any "self-seeded" palm trees that germinate on the course are transplanted to the perimeter of the property where they have more space to grow. The landscape used on the Classic course is not native and colour/aesthetic appeal is prioritised. The Legends course is more native with a focus on coconut palms and mangrove wetlands but featured landscape areas are still not native. CIP: Please try to complete the bird nesting box project and submit it as a Highlight. CCIP: Please complete the habitat management plan document as discussed. CCIP: Please explore the feasibility of native landscape species that could replace more exotic landscape plants to improve biodiversity.
N1.4 Conserve key species	N1.4.1 Practical conservation measures for priority species		See previous point on mangrove tree planting program. The bird nesting boxes are a great start and once the species list is completed, perhaps a plan could be made to conserve any priority species identified on site.
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	All turf surfaces on the golf course are Platinum Paspalum which is very suited to the climate and can cope with the poor irrigation water available to them. This grass variety is very prone to disease and insect damage and requires large amounts of fungicide and insecticide to be kept healthy and looking good in this climate. They are currently undertaking trials of Bermudagrass species to try and identify a more cost-efficient species to use on their greens.
	N2.1.2 Practices to maintain good soil structure and condition		The greens are aerated every 2 weeks with small diameter tines to promote water and air movement through the profile. They are also lightly topdressed with sand every 2 weeks to dilute organic matter accumulation.

			The fairways and tees are aerated annually to reduce compaction and organic matter accumulation.
	N2.1.3 Careful and responsible fertiliser application throughout the year to avoid over-fertilisation	Undertake soil tests and nutrient analysis	Confirmed soil and water test results are present. Fertiliser use is based on feel and experience with no monthly/weekly tracking of total nutrient applied. While on site, we discussed a more efficient and targeted method of nutrient application planning and soil test interpretation, which they said they would investigate. CIP: Please research and apply the MLSN guidelines as a method for soil test result interpretation and fertilisation.
	N2.2 Prioritise mechanical maintenance	N2.2.1 Non-chemical pest, disease and weed management	Sharpen mowing blades; Remove surface moisture; Hand weeding The team currently utilise physical removal for most of the weeds in the turf surfaces (Bermuda and Spurge). They have built a large turf nursery specifically for this process. Mowing blades are ground and adjusted regularly to provide a high quality of cut.
	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 current disease threshold on all areas of the course is 0% and a preventative program is currently in place across greens, tees, fairways and rough. This results in a large quantity of chemical being applied to the entire course on a monthly basis. The main pest that they struggle with is Army Worm. This is sprayed as soon as first symptoms appear due to the speed at which this pest can cause damage. I believe that the team has sufficient education to correctly identify pests and diseases. They also have informational posters in place to aid in identification. Daily scouting is in place, but there are no records filled out after identifying an issue. CCIP: Please start filling out a scouting report when active pests or diseases are identified on the course. This will help to track patterns and common locations for outbreaks. CIP: Please try to establish thresholds for disease damage on fairways and rough.

			CCIP: Please explore the feasibility of spot treatments of outbreaks rather than boom spraying all surfaces.
	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 .	There is no chemical application record in place. MSDS records for all chemicals stored on site have been printed and posted in the store and office. Chemical protective equipment, including a respirator, rubber gloves and boots, Tyvek single use chemical suits and safety glasses has been purchased and put into use. The leftover product is sprayed out onto the nursery. The equipment is calibrated monthly. CCIP: Please start recording every chemical application on the property including area, size of area, weather conditions, chemicals and fertilisers used, applicator name and date. Each application should have its own single page record.
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.	An emergency spill response plan is in place. There are no formal recorded buffer zones or map in place. I discussed what is classified as a buffer zone, its purpose and how best to create the map while on site. The sandy waste areas act as large buffer zones on the Legends course. There is certainly a need to formalise buffer zones on both courses considering the importance of the surrounding wetland habitats. CIP: Please try to create buffer zone maps for all areas surrounding wetlands, water bodies or other ecologically sensitive areas and train the team on how best to avoid and maintain them.
	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	Licenses confirmed. Hazardous materials were safely and securely stored in the loading area at the back of the hotel/clubhouse. All wastewater is sent to an onsite processing facility which is maintained by the government.

	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	Licenses confirmed. All wastewater is sent to an onsite processing facility which is maintained by the government. The chemical store was large, well-lit and well ventilated. However, I found a large amount of chemical which was housed in the fertiliser store which did not meet chemical store requirements. I brought this up while on site and all that product was moved to the primary chemical store that same day. The shelves in the chemical storage area were made of wood, not steel or plastic. The washing and preparation area is on a concrete surface with all drainage flowing to the onsite treatment facility. Pesticide containers were only double rinsed and did not have holes punched in them before disposal. CCIP: Please create a SOP for triple rinsing and punching of pesticide containers and train the team in the correct process of disposal. CCIP: Please change the shelves in the chemical store to an impermeable material like steel or plastic.
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	As above, there is no chemical/product log in place. No local authorities have inspected the fuel tank that they can remember. They said they will investigate this. The fuel tank is stored in a secure concrete building with a concrete floor and bunding to prevent any spills. The building has minimal ventilation though. Emergency spill containment kits for the fuel storage and chemical store locations have been purchased. Fire extinguishers were in place. An emergency shower has been installed close to the re-fuelling and chemical loading location. Currently there is sufficient storage for all chemicals, however, the store is full to capacity.

			There is no petrol storage facility on site. Petrol is delivered by truck daily and all machines are filled daily. CCIP: Please ensure that the fuel tanks are certified by the relevant government authorities before the next verification date. CCIP: Please install more ventilation in the fuel storage room. CIP: Please try to implement a par stock process for purchasing of chemicals and fertilisers to minimise the stock held on site to avoid running out of storage space. If this is not possible, investigate the feasibility of expanding the chemical storage area.
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)	Licenses confirmed. All wastewater is sent to an onsite processing facility which is maintained by the government. The wash bay is on a concrete pad with all drainage leading to the on-site waste processing facility.

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	The course has a new Rainbird irrigation system with individual head control and Cirrus Pro central control computer. The individual head control allows them to irrigate essential surfaces only. The Paspalum turf variety present requires more water than Bermuda. They are currently undertaking trials of Bermuda to see if it can be a viable alternative.
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;	A TDR soil moisture probe is used on greens every day as part of their hand watering strategy. Confirmed Rainbird Cirrus Pro irrigation software installed.

		Ensure irrigation schedules are informed by weather patterns and soil moisture analysis	The team receive training by the superintendent about auditing and calibrating the system. We discussed getting the Rainbird distributor more involved with the training. There are no longer any weather stations connected to the system. However, they calculate ET manually for both courses and adjust their programs according to the daily ET value. They also station a staff member on site overnight during the wet season to turn off the irrigation if it begins to rain. We discussed the benefits to efficiency by installing new weather stations and having them connected to the computer. The system is audited once per year on both courses. CIP: Please try to install a new weather station and connect it to the irrigation control software to improve the efficiency of irrigation programming and labour.
	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	Confirmed internal record keeping of water use by facility with monthly meetings to assess consumption. I looked at the charts and reports during the visit. The water use data uploaded to GEO was for the golf course only. CIP: Please investigate initiatives to encourage water-saving practices amongst your team and visitors.
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	No water abstraction permit required. All irrigation water is sourced from lakes on the property. Recycled water is added to the lakes from the on-site treatment facility.
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 team are actively reducing the turf area by reducing the width of playing corridors and expanding sandy waste areas on the Legends course while expanding landscape areas on the Classic course.
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	Confirmed internal record keeping of energy use by facility with monthly meetings to assess consumption. I looked at the charts and reports during the visit. The energy use data uploaded to GEO was for the golf course only.
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	The property is currently investigating the use of solar power to support their demand, but no formal plans are currently in place.

		on-site, through renewable energy providers	
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	Confirmed internal record keeping of waste disposal from the GCM facility only. However, the “biodegradable and composted” and “anaerobic digestion” waste and recycling data included scrap metal sales and soil, grass clippings and trees. There were no records for recycling or waste separation from the hotel/clubhouse.
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 ingredients are sourced locally from Malaysia except beef, lamb and cheese products. No policies in place yet to use predominantly goods made from recycled or biodegradable materials. CCIP: Please develop a sustainable procurement policy to use more recycled materials and outline the possibility of eliminating single use plastics alongside other initiatives to reduce waste sent to landfill.
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	There was no waste separation in place at the hotel for dry or wet waste. All is sent to landfill. The chef did mention that they have a plan to implement this in 2024. The bins around the facility and waste area are not separated for recycling. All waste goes into general waste. The clubhouse/golf operations collect all plastic bottles used on the golf course by guests to be sold to recycling centres. The GCM facility has some waste separation for cardboard and old chemical containers. Most of the waste goes into a large skip bin and is sent to landfill. There were many plastic bottles and other garbage mixed into the green waste at the GCM facility. The need for greater control of waste was highlighted and the team began cleaning this up on the same day. All plastic and garbage surrounding the GCM facility has been cleaned-up.

			CCIP: Please enforce new SOPs for waste disposal in the area. CCIP: Please implement waste separation procedures for the hotel/clubhouse and track all waste and materials disposed. Include the GCM facility in the same policy and procedure.
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	Licenses confirmed for all contractors

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		Mostly corporate golf events. It is a daily fee golf course with no members.
C1.2 Provide for volunteering and charity	C1.2.1 Opportunities available for volunteering and support of charities and good causes		Nothing in place yet besides corporate events that raise money for charities. Discussed the possibility of donating a percentage of the green fee to a cause or charity.
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'	No sustainability working group set up yet. We discussed who should be included in the group, frequency of meetings and discussion topics. CCIP: Please create a sustainability working group and meet regularly to discuss sustainable initiatives and engagement with the local and wider community.

C2 Golfers & Employees			
C2.1 Improve health and wellbeing	C2.1.1 Benefits to human physical and mental health from golf and facility activities		Nothing in place yet but discussed sharing information on this topic over their social media and website.
C2.2 Be open and inclusive	C2.2.1 Inclusivity and diversity in membership and visitor policies	Demonstrate inclusive policies for members and visitors	It is a daily fee course with no restrictions on who can play or visit the property.
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	Employee induction procedures are in place with a focus on health and safety. We discussed implementing risk assessments as part of the induction process. CCIP: Please complete risk assessments for the hotel/clubhouse and GCM 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	Not included as part of their marketing plan yet, and there is no educational signage placed around the property. We discussed including information on their achievements as part of their social media campaigns and signage that could be included around the property. CIP: Please try to share your sustainability commitments and achievements through signage or on your website, social media, or other media platforms.
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	No partnerships in place yet. We discussed the possibility of building a relationship with a local university to assist with the biodiversity survey or other environmental projects.

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