GEO Certified® Report
Kingsbarns Golf Links

Prepared by independent verifier, Carolyn Hedley

Certified by GEO Foundation: September 2022
Valid until: September 2025

"Kingsbarns Golf Links have demonstrated that in addition to being an internationally recognised golf course, providing a high-quality customer experience, they are also an exemplar of sustainable golf management. This award of certification renewal shows their commitment to continual improvement across nature, resources and community practices.

I was particularly impressed with the nature partnership activities, the sustainable turf management performance, the community engagement, the excellent sustainability actions undertaken in the clubhouse hospitality operations and the high-quality home-grown produce.

I look forward to seeing further sustainability success at Kingsbarns Golf Links in the future."

Carolyn Hedley

(GEO accredited independent verifier)

Introduction

GEO Foundation is pleased to confirm that **Kingsbarns Golf Links** 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.

Kingsbarns Golf Links 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, **Kingsbarns Golf Links** should be awarded GEO Certified® status.

For the certification period stated above, **Kingsbarns Golf Links** can therefore claim a position as a leader in advancing sustainability in golf – making important contributions in protecting nature, conserving resources and strengthening communities.

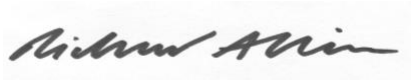
The GEO Certified® Report that follows comments on the actions undertaken against the criteria, as observed by the independent verifier during the assurance process.

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.isealalliance.org**

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	The Course and Facilities Manager Innes Knight and his team have demonstrated a detailed and sound understanding of the nature and landscape value of the site.

				The golf course and surrounding habitats have been mapped and observed during my visit including grasslands, scrub and gorse areas, sand dunes, hedges and woodlands. Our discussions highlighted a good understanding of the importance of habitat management for ecological value as well as course appearance and playability. I can confirm a variety of surveys and recent specialist habitat reports have been produced since the last certification period, including RSPB guidelines for corn bunting feeding and a tree survey and maintenance report. **CIP** Further surveys such as a botanical survey are planned for the next few years in conjunction with local academic institutions.
	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	There is a designated Site of Special Scientific Interest, the Fife Ness SSSI, along the coastal area which includes part of the 15th to 12th Holes. This conservation designation is awarded by NatureScot for both geological and biological natural features. Our discussions showed there is knowledge and an understanding of the species present and the management responsibilities in this area. The area was previously subject to coastal erosion and flooding and appropriate repair and ongoing management has been conducted within the legal consent objectives.
	N1.1.3 Understanding and respect for cultural heritage	Protect any archaeological, historical or cultural designations on the site	There are some Scheduled Ancient Monuments (SAMs) and Archaeological areas across the course which are protected in accordance with Historic Scotland requirements. Although unable to be viewed on site as below the ground, details and correspondence was made available.
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 managed turf areas on the course are minimised while meeting the needs of visitor golfers and championships such as the Alfred Dunhill in Sept/Oct. Out of play areas are naturalised with grassland carries and scrub habitats defining the in and out of play zones and keeping golfer landing areas in mind. Woodland areas have increased with Spruce planting at the 14th. Areas have also been identified to increase wildflower habitat to benefit pollinators and visual impact.

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 advice received from surveys and expert advisors has been used to produce a Habitat Action Plan which prioritises native habitats and species improvement projects. Projects are often in conjunction with the Cambo Estate and Fife Coast and Countryside Trust. Habitat and species protection is also taken into consideration when setting up the course for tournaments, including roping off sensitive areas from spectators etc. Note – suggest sand dunes planting and transplanting work could be made into a Highlight for the facility's certification webpage and used in promotion of environmental achievements.
N1.4 Conserve key species	**N1.4.1 Practical conservation measures for priority species**		There is a list of identified bird and mammal species including details of the resident otter. Another key species project is for corn bunting protection and feeding in conjunction with the RSPB. **CIP** The planned botanical survey could extend to further plant species of note.
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 turf species mix on the course was discussed, and agronomy reports provided. The predominantly Fescue / Bent / Poa species mix (with some ryegrass in tees and practice ground) is appropriate for the soil and climate conditions and the high traffic impact of a shorter season. (30k rounds over 9 months). Management includes optimising the fines grasses with overseeding of fescues and sand topdressing to reduce inputs, increase stress tolerance and provide highest quality surfaces and condition for visitors and tournament standards.
	N2.1.2 Practices to maintain good soil structure and condition		External agronomic advice and soil monitoring is used to support the turf management programme. This includes aeration and verti-cutting and sand / top dressing to ensure that the soil structure and condition is optimised. Note – There is approx. an 8% reduction in sand topdressing compared to 2017 data.

	N2.1.3 Careful and responsible fertiliser application throughout the year to avoid over-fertilisation	Undertake soil tests and nutrient analysis	Soil nutrient levels are tested to support the targeted fertiliser program. Note - There is a significant reduction in N and K inputs compared to 2017 annual data.
N2.2 Prioritise mechanical maintenance	**N2.2.1 Non-chemical pest, disease and weed management**	Sharpen mowing blades; Remove surface moisture; Hand weeding	Cultural, non-chemical pest, disease and weed management methods are used to reduce the quantity of chemical inputs needed such as equipment efficiency and washing, sharp blades, and surface moisture removal.
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	There are a small number of targeted herbicide, fungicide and growth regulator applications as part of the overall management programme to counter diseases and deter crow damage. Good identification practices, monitoring and chemical records were available. Kingsbarns is part of a group-buying arrangement for turf products with other local clubs.
	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	Application and storage compliant with H&S and pollution prevention legislation. Great record keeping in place for staff sprayer training and qualifications, equipment calibration and servicing and chemical quantity logs. PPE, spill kits and wash stations and spill prevention kits were observed.
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.	There are procedures in place to minimise any pollution risk for turf management operations and to deal with the event of any chemical or product spills or emergencies. Spill kits were available, and all staff are trained in the procedure. Mowing buffer and no spray zones are in place around the open ditch in front of the 18th and protected shoreline which were observed on the course.

				Water quality testing (biological, chemical and physical) on the course is carried out by SEPA. **CIP** It was discussed that the SEPA Emergency number should be more prominently displayed and added to all appropriate documentation. The SEPA NetRegs website is also a useful reference up to date legislation.
		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	In the clubhouse, all hazardous materials such as cleaning products are securely stored in accordance with all COSHH guidance and staff training. Clubhouse waste is separated according to legislation and wastes such as oils and food waste are removed by specialist contractors. Wastewater is to mains sewer with a formal discharge agreement.
		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	Through my observations and discussions with Alan Mackie the mechanic, I could see that the maintenance facility is managed to a high standard and is well organised which will reduce any pollution risks associated with operations. Machinery washing and chemical mixing is on an impermeable wash bay area and effluent treated by a Waste-2-water closed loop biological system. All other wastewater goes to a septic tank which is emptied by a licenced contractor. Waste chemical containers are triple rinsed.
	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	Licences and records of all hazardous materials, inspections and staff training were presented. Current practices, hazardous materials and fuel storage were deemed to comply with current regulations with the required bunding and safe secure containment. I was able to observe the first aid kits and fire extinguishers.

	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)	Wastewater is to either mains sewer with agreement or to a septic tank at the maintenance facility. The Waste-2-water closed loop biological machinery washing system was observed. Natural reedbed treatment options were also discussed.

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 is abstracted under a SEPA abstraction licence from two groundwater boreholes and recorded quantities for 2021 are 12459 m3. Slightly less than the 13000 recorded in 2016 for the previous certification. Irrigation water is targeted only at playing surfaces and focus on fescues reduces demand also.
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	There is an automated Toro Links irrigation system installed which is linked into a weather station for accurate monitoring of forecasts. Soil moisture monitoring with a POGO moisture probe to determine and focus irrigation requirements will also increase efficiency. An Air Spade is also used to lift the soil and reduce compaction, increasing effectiveness of water and inputs. Irrigation coverage is monitored and the system is regularly serviced to ensure efficiency.
	R1.2.2 Practical measures to use water more efficiently in buildings	Audit water use regularly; Review bills frequently and look for irregularities;	Clubhouse and maintenance facility use mains water. Bills and usage are monitored and tracked - 2581m3 mains water usage is similar to 2016 data of 2595m3.

			Encourage water-saving practices amongst staff and visitors; Categorise and track water consumption	There is only 1 meter that serves the site so difficult to track usage in different built areas so submetering is recommended. Various water saving devices are built into kitchen and bathrooms to reduce need and mains water usage and staff are encouraged to reduce water across the facility.
	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 abstraction consent documentation was viewed, and water quality is regularly tested. Abstraction data is reported annually to SEPA. Abstraction quantity and storage capacity is sufficient at the present time but there is an understanding that as the climate changes requirements may change also. **CIP** Recommended that SEPA drought maps / predictions are also considered in warmer months to monitor the security / availability of the abstraction resource.
	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	Energy consumption through course management is minimised through naturalisation of many out of play areas reducing fuel and inputs. Some areas for further naturalisation and wildflower establishment were also discussed during the course visit. Recycled sleepers have been used as path edging in some areas which is also reducing maintenance. The maintenance and efficiency of course machinery was also discussed with mechanic Alan Mackie.
	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	Discussions with the team confirmed that energy consumption is regularly monitored, and bills reviewed. Staff are trained in energy saving practices and during induction. The current built areas and the new clubhouse extension have various energy conservation measures in place to reduce energy use. LED lights are being installed across the facility with some controls to increase efficiency such as motion sensors on internal and security lighting.

				Natural light is being utilised more to reduce need for artificial lighting, including skylights installed at the halfway house. Clubhouse heating demand is less during the winter months as the course is closed to visitors. The use of electric carts, the increasing use of electric / hybrid machinery, and the provision of electric vehicle (EV) charging points with timers in the car park is also reducing carbon emitting fossil fuel use.
	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 process is underway with investigating and costing out options for onsite renewable energy generation through solar photovoltaic panels for the maintenance facility roof.
	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	Materials and products minimisation was discussed with the course manager, pro-shop staff and clubhouse operations manager Sue Hutchison. There is a good understanding of the need to reduce wastage by reducing products brought onto site and the benefits of choosing more sustainable, reusable, recycled and longer lasting materials. On the course, turf product inputs are minimised through sustainable turf management practices, winter maintenance programmes and green waste reuse, and often bought in bulk with other courses to reduce delivery miles and emissions. Great efforts have been made in the clubhouse / catering department to review all products purchased to see if more sustainable alternatives can be used. Many disposable and single use plastics have been eliminated, complying with new Scottish regulations, for example a move to paper packaging for takeaway food and eliminating individual sauce sachets.
	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	Although no written sustainable purchasing policy was viewed, decisions on supply chains are made with sustainability and reducing carbon footprint from deliveries in mind. This includes certified products, fish sourced from the local harbours in Fife, meat from local producers, and local whisky branded specially for Kingsbarns.

				Most impressively, an increasing supply and variety of fruit and vegetables are grown in an onsite polytunnel led by Hugh Barnier, and these are used in the seasonal clubhouse menu including providing meat-free options. The pro-shop is also making progress moving gradually away from single use plastic with reusable water bottle available. Golfers are encouraged to use these and there are water refill points around the course, which were being utilised during the course visit. They are also going to be stocking 'Ocean Tee' recycled club covers and looking into other sustainable clothing fabrics. The conversation is continuing with suppliers to reduce packaging where possible.
	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	Waste streams, data and records are tracked. Dry mixed recyclables, glass and food waste are separated with recycling bins across the facility and course and all removed from site in accordance with legislation and specialist contractors. Green waste such as soil, cores and clippings are reused on site or composted and waste wood is recycled into course signage. Old equipment and range balls are also donated. Note - Waste data presented indicates a 96% recycling rate which is great. Zero waste to landfill could be a future target…
	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	Kingsbarns is compliant with waste legislation, and all waste contractors are authorised / licenced and good records kept. It was discussed that the SEPA NetRegs and Zero Waste Scotland websites are useful resources.

	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		Kingsbarns are welcoming to the public providing paths and signage for safe access to the beach and along the coastal path. The course is used for educational visits / course walks.
C1.2 Provide for volunteering and charity	C1.2.1 Opportunities available for volunteering and support of charities and good causes		Staff are encouraged to take up volunteering opportunities and they have supported community groups and many charities including cancer research and RNLI, community sports and guide dogs and wildlife organisations.
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'	There is an informal sustainability group of key members from each department mentioned in this report that all contribute to environmental activities. There are various partnerships with local community groups including local schools.
C2 Golfers & Employees			
C2.1 Improve health and wellbeing	C2.1.1 Benefits to human physical and mental health from golf and facility activities		Free coaching and equipment is provided to local children through the 'Pathway to the Fairways' scheme. Healthy activities and walking is promoted and encouraged with access paths and trollies provided.
C2.2 Be open and inclusive	C2.2.1 Inclusivity and diversity in membership and visitor policies	Demonstrate inclusive policies for members and visitors	There are no members at Kingsbarns but there is an open and inclusive policy for visitors including no discrimination, accessibility and encouraging family golf and local community engagement.
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 inductions and good training is in place, and I observed good health and safety records and risk assessments in the greenkeeping department.
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	The staff team are aware and engaged with the efforts being made to become more sustainable and are trained in the various aspects that affect their roles.

				Visitors will be able to witness the high-quality course and clubhouse facilities and visible actions such as recycling points etc. but lots more could be done to communicate the sustainability achievements that are going on behind the scenes. **CIP** More could be made of the sustainability excellence at Kingsbarns on the website, through social media channels and to tournament spectators.
	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	Environmental and nature walks are conducted with local communities. Course walks are also conducted with international greenkeeper and students. There are proposed nature activities in partnership with local education establishments.

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