

Climate Change & Course Improvements

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How EIGCA members help
golf clubs deal with the
challenges of climate change

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Golfpark Holzhäusern. Architects: Steiner &
Partner Landschaftsarchitektur GmbH



Golf Club Thunersee. Architects: Steiner & Partner Landschaftsarchitektur GmbH



INTRODUCTION

Due to the combined pressures of climate, regulation, and resource scarcity the golf industry is facing an uncertain future.

The R&A has identified key sustainability issues through their Golf Course 2030 research programme, and together with the European Institute of Golf Course Architects (EIGCA) and GEO Foundation for Sustainable Golf (GEO), the industry is prepared for the future through industry-leading education, research, skills and third party verified certification and support.

This work has helped identify the need for change, and EIGCA members can directly help golf clubs address these sustainability issues at the ground level.

EIGCA members are well-positioned, well-respected and well-educated on the subject matter of quality course improvements and sustainable development paths that can help prepare for these future risks.



EIGCA is the only golf architecture association to create a comprehensive voluntary Continuing Professional Development (CPD) programme dedicated to sustainable golf development, in collaboration with GEO. Meaning, EIGCA members are best placed to advise golf courses on how to invest and develop in ways that can help address these pressing issues, making courses more resilient and better prepared for the challenges that lie ahead, including the impacts of climate change, resource use and the effect of future regulations.



Our members are well trained and well-versed in global issues and how they have an impact locally on the successful running and improvement of golf courses. They do this through their experience in design and masterplanning of golf facilities and their continued education and training on contemporary issues of sustainability and regulation changes.

Caspar Grauballe, EIGCA President 2023-2025

In delivering you advice and services, EIGCA members will draw upon new knowledge being researched and developed through The R&A's forward looking *Golf Course 2030* research programme and also promote the support and certification programs provided by GEO.



Industry leading research and knowledge www.randa.org/what-is-gc2030	Facility support and recognition https://sustainable.golf/
• Materials and research across the themes of Sustainable Agronomy, Resources, Biodiversity and Climate.	• Open source guidelines for planning, design, construction, renovations and facility operations
• Collaborative industry research from scientists, academics and industry leaders.	• Free online 'OnCourse®' programme for tracking practices and key data
• Freely available guidance and resources in key areas.	• Annual sustainable golf scorecards and carbon reports
• National Golf Federation sustainability priorities and support available.	• Third party verified certification for developments and direct support for ongoing operations

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Golf course decision-makers must be informed and prepared for the sustainability challenges and opportunities faced. Working with experts, such as the R&A's network of agronomists and scientific researchers, EIGCA golf course architects are well-placed to guide golf facilities to plan for a sustainable future.

John Kemp
Project Manager – Golf Course 2030, The R&A

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It is inspiring to see the EIGCA's continuous leadership in sustainable development. They are providing a vital support and service to the sport and to the success of developments, renovations and facilities around the world - while tackling some of the most significant challenges of our time.

Sam Thomas
Sustainable Golf: Developments Director, GEO

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Drivers for action		How an EIGCA member can assist you
Resources	Water > Reduce demand	Creating designs which reduce water demand • Planning and reconfiguring suitable playing areas with a smaller turf footprint • Advice on responsible turf selection and help educate to embrace a non-monoculture of native species where feasible • Design out-of-play landscape to be less or totally non-reliant on artificial irrigation • Provide specific advice on latest local regulations affecting water management issues • Design more efficient forms of irrigation and provide technology insights with a long-term cost-benefit assessment
	Water > Manage surface run off	Integrate more sustainable forms of drainage • Look for opportunities for stormwater harvesting, storage and aquifer recharge solutions • Design playing surfaces to drain surface water towards out of play areas and soakaways • Use native vegetation as a filtration tool to help improve water quality and increase local groundwater recharge
	Aggregates > Reduced reliance on sands, gravels	Designs which maintain the challenge and interest of golf but reduce requirement for sands (bunker, greens) and gravels • Provide more creative and bespoke performance specification writing • Help with better assessments and testing for suitability of materials • Where feasible, use alternative construction methods for greens (i.e. modified USGA spec., California, etc.) • Design for different materials / textures in bunkers based on what sand is readily available locally • Finding innovative drainage solutions for heavy soils without sand capping (i.e. more drainage or porous ceramics) • Assess the cost-benefits of bunker liners – saving sand from contamination or erosion • Seek to find alternative hazards that can include fewer, smaller bunkers or no bunkers • Explore the use of recycled materials where feasible
	Biodiversity > Increased awareness and expectations	Design in biodiversity improvements during renovations or new developments • Design to maximise the site / course's existing natural abilities • Include opportunities to propagate and encourage existing species in disturbed areas while maintaining playability • Present alternative ideas for less traditional golf course formats where suitable • Specific advice on specialist seed mixtures for rough areas or new habitat patches • Design advice on creating new wetlands or habitat areas

Drivers for action		How an EIGCA member can assist you
Regulation	Chemical use > More restriction on use	Increase awareness of the options for alternative agronomic practices • Work directly with agronomist and course team to create win-win solutions • Explore introducing more natural rugged look and communicate benefits of different presentation styles • Encourage openness to non-traditional turf types that require little to no chemical input
	Carbon > Reduce emissions	Work with course team on improving efficiency of maintenance practices and routines • Promote the use of electric or solar powered maintenance equipment • Help in specifying the use of local materials and sources • Create detailed features that require manual labour detailing versus petrol-operated machinery • Find opportunities to require less mowing (i.e. reducing intensive maintenance turf surfaces) • Create designs that do not require intensive fertility programmes • Reduce overall hard surfaces which have high embodied carbon content • Introduce innovations on soil amendments (e.g. bio-char)
Climate	Extreme weather events > Reduce flooding, soil erosion	Design more resilient solutions to prepare for increased extreme weather events • Design in stormwater harvesting, storage and aquifer recharge solutions • Design to increase area of porous / porous surfaces • Plan for detention, retention or soakaway areas • Design to embrace the idea of golf courses as flood defence tools for the community • Raise awareness of local regulations and flood risks • Create courses that work with natural water and erosion trends not fighting against them

FURTHER INFORMATION

European Institute of Golf Course Architects (EIGCA)

www.eigca.org

GEO Foundation

<https://sustainable.golf/>

The R&A

www.randa.org/sustainable-golf

