



**Sustainable Golf
Development**
Voluntary Sustainability Standard

User Handbook

Practical | Relevant | Accessible

Second Edition

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photo credit: Irie Fields Golf Club, St Kitts & Nevis

Foreword

At the intersection between community, nature, climate, business and media, golf is embracing its opportunity to embrace a leading role in society's path to a more sustainable future. Through its distinct attributes, golf is uniquely equipped to transcend the ordinary benefits of a sport.

When golf is offered through an inclusive format it promotes health and wellbeing within natural spaces; it is playable amongst a wide range of athletic abilities; it is an activity that builds intergenerational relationships and it is a real life classroom for developing youth life skills.

Since its very first design, golf has offered an intrinsic benefit of connecting people to nature. When golf is designed to exist within the beauty and constraints of the natural environment, it contributes to ecosystems and provides a safe haven for wildlife.



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Introduction

In the 21st Century, more and more businesses, organizations and individuals are building sustainability into their day-to-day decision making. Understanding how we do business is as important to today's customer as what we do. Building sustainability into the day-to-day decision making has become the expectation for businesses, organisations and individuals alike. In golf, there is an ever growing number of facilities that have found.

'being more sustainable' meant doing things simpler, better and faster.

The Sustainable Golf Development Voluntary Sustainability Standard (VSS) provides a framework for the effective integration of sustainability into the design and construction processes for golf projects.

It is intended for use by a number of groups, including golf industry professionals and developers, to provide a generally understood baseline. The VSS should also be used by governments and permitting authorities to support policy making and raising awareness of sustainable golf development.

The VSS can be applied in any country and is designed to be complimentary to national legislations and priorities. The purpose of the VSS is to provide guidance on maximizing the potential sustainability gains from new developments or major renovations to existing facilities.

Seeing real-world results¹

Financial savings

Golfbaan Het Rijk van Nijmegen, Netherlands - Saving €5,000 per year after the installation of 148 solar panels. 50% saving by using renewable energy, and 50% income from subsidies.

Water savings

Houghton Golf Club, South Africa - The introduction of soil moisture meters technology has lead to greens water consumption reduction of 45%, resulting in a saving of R6900 per year.

Waste reduction

Costa Navarino Dunes
Establishment of an extensive recycling program, leading to a significant drop in tonnes of waste going to landfill. The program includes paper, plastics, glass, used oil, batteries and organic waste.



photo credit: Rio Olympic Golf Club, Brazil

¹ Real-world results captured by the OnCourse® on-line platform managed by GEO Certification Ltd.

What is the Voluntary Sustainability Standard?

The Sustainable Golf Development Voluntary Sustainability Standard (VSS) identifies the baseline expected of a sustainable golf project. After three-years of road testing and consultation on a global scale the commentary and feedback has been incorporated into the VSS document. Key characteristics of the VSS are that:

- Anybody can access and use the VSS for free.
- It is a voluntary standard.
- It has been shaped by the road testing and the consultation process led by the Expert Working Group and has been operational for five years.

Standard setting is an iterative process with the process of reviewing and developing the VSS continuing on a 5 yearly cycle to ensure the standards and practices associated keep pace with understanding and research in sustainability, industry changes and improvements in golf development practices.

The VSS aims to find a balance between accessibility and performance. It covers the process of designing and constructing a golf course. The VSS can be applied to new projects as well and major renovations of existing facilities. The key positive impact that the VSS delivers is a comprehensive view of the benefits a golf project can provide across the whole sustainability agenda. This sustainability agenda has been defined under three headings for the purpose of the VSS:

- Nature – conservation and enhancement
- Resources – savings and efficiencies
- Community – benefits and long term legacy

The criteria contained within the VSS are organized into the three key work stages of the golf development process up until the opening day of the golf course. At the point of opening day the “GEO Certified Evaluation Criteria (club and course management)” can be applied. The key work stages of golf development are:

1. Preparation
2. Design
3. Construction

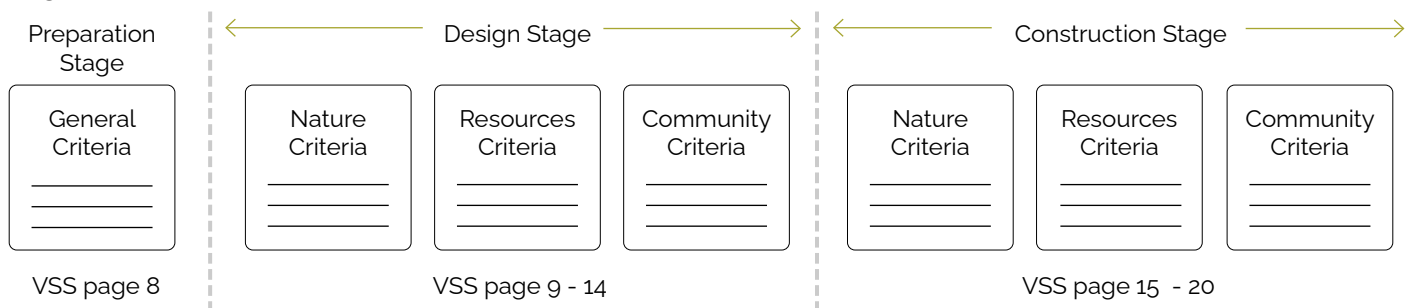


Figure 1. Illustration of the Criteria arrangement into stages and themes



Options for using the Voluntary Sustainability Standard (VSS)

A golf development choosing to use the voluntary sustainability standard (VSS) can choose one of four scenarios. The schematic below illustrates: the four scenarios, the items a proposed golf development would use and the types of claims¹ it could make.

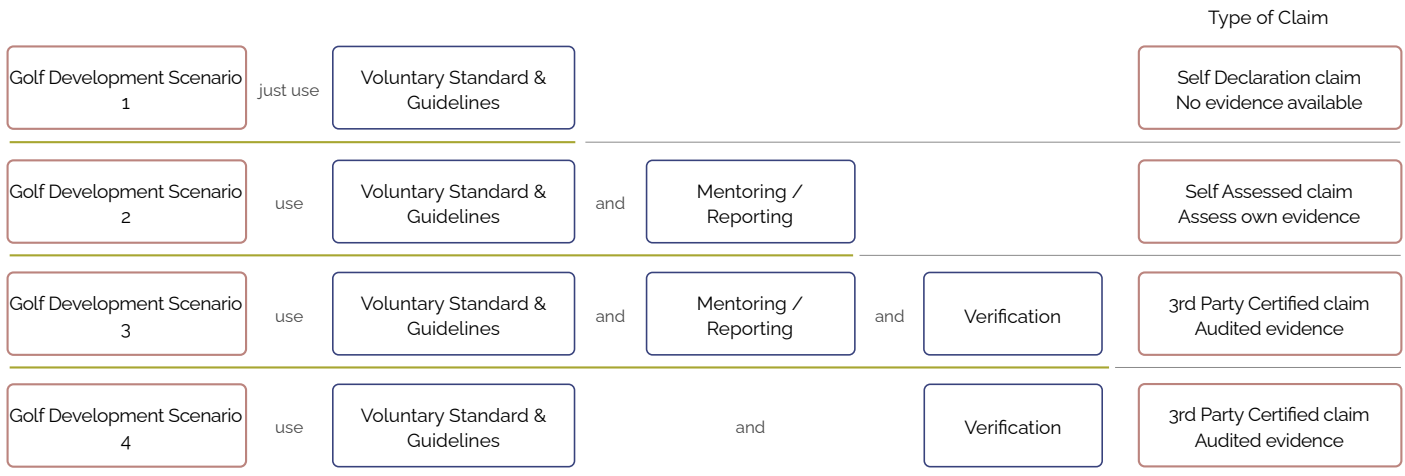


Figure 2. Golf development scenarios

Supporting Documents

The VSS can be used simply as a reference guide to better understand the anticipated activities a sustainable golf development carries out. This situation would equate to 'Scenario 1' in the schematic above.

For those golf developments looking to get more from the VSS they need to consider how they may communicate their work publicly². The schematic below illustrates the typical main stages of a golf development and provides a reference to the relevant page(s) of the VSS. These reference pages provide guidance on the types of supporting documents a golf development is anticipated to generate at those main stages.



Figure 3. The phase of development and corresponding page reference

Certification

Seeking a certification for using the VSS would involve the use of an assured verifier. There is access to a network of these independent assured verifiers through the OnCourse® Developments program who can work with golf developments to help with reporting and to assess their supporting documentation against the VSS criteria. Support and further information about the OnCourse® Developments program is available by contacting GEO Certification Ltd.

¹ For guidance on the types of claims and their content please refer to "A guide to making claims in relation to the Sustainable Golf Development Voluntary Sustainability Standard - Version 1.0. October 2016"

² For ease of sharing such documentation, consider housing it on-line location in an easily viewable format and size.

Applying the criteria to a project

The VSS arranges the criteria in order of 3 headings of **Nature**, **Resources** and **Community**. These headings relate to the 3 pillars of sustainability. To aid the practical application of the criteria, the schematic below sets out the baseline criteria in a chronological way, i.e. generally the way you would work through a golf development. Given the very broad nature of 'design' and 'construction' stages these have been broken down into 'Design Stage 1', 'Design Stage 2' and so on.

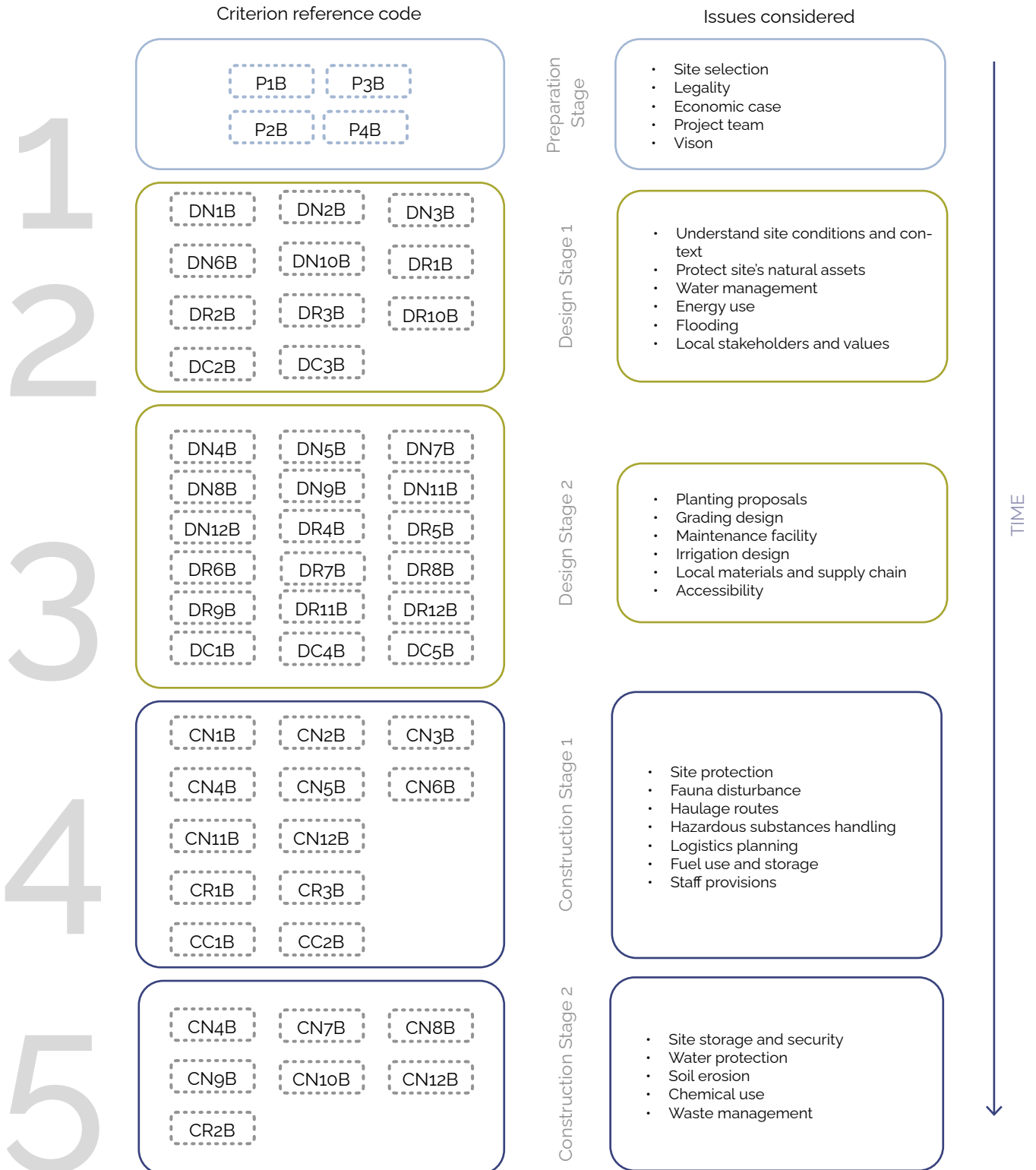
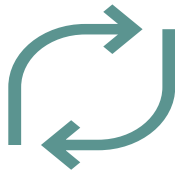


Figure 4. Broad chronological arrangement of criteria

The VSS Themes



Nature



Resource



Community

These themes are intended to translate the three sustainability pillars into practical actions for golf developments. Enabling them to better embrace sustainability at their inception and throughout their lifetime.

Nature

The nature theme addresses issues related to the development's landscapes, ecosystems and biodiversity. The VSS aims to conserve and enhance the natural environment through examination of key topics. This contributes to a closer relationship between the golf course and its landscape context - specifically protecting and enhancing the biodiversity, native habitats, landscape character of the proposed development site, water and soil quality protection, site restoration, erosion and sedimentation control, reduction of impacts and mitigation measures.

Resources

The resources theme addresses issues of optimizing the use of natural resources and encouraging the procurement of local materials. This contributes to a resilient and more efficient golf development - specifically the sensitive and efficient application and collection of water, responsible management of the wider watershed, energy efficient approaches to design, minimizing waste, locally sourcing and life-cycle materials for design and construction, encouraging the use of renewable energy and reduction of demand on national energy grids.

Community

The community theme addresses issues pertaining to the connection and voice of the local community. The VSS aims to create strong community integration and social values. This contributes to an increased awareness of local community interests and needs - specifically by developing an ethical & efficient supply of materials, greater social equality and educational values, engagement with local community groups, protection of cultural heritage, local employment, procurement policy and support for credible certification of materials.



photo credit: Rio Olympic Golf Club, Brazil

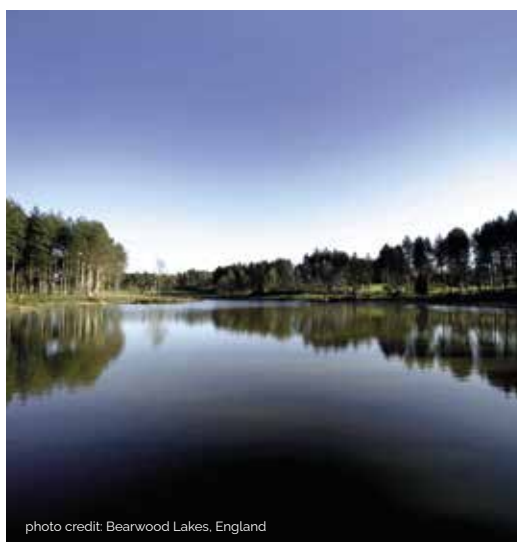


photo credit: Bearwood Lakes, England



photo credit: Rio Olympic Golf Course, Brazil



Criteria Explained

The following section presents four criterion examples: P1B, DN1B, DR6B and CC1B. The examples detail the following characteristics:

- Criteria reference: refers to the stage, level, and criteria number⁴.
- Level: Baseline or Improvement.
- Sustainability Objective: What is being accomplished by implementing the criteria.
- Performance Requirements: Recommended actions to complete the criteria.
- Supporting Documentation: Recommended documents to demonstrate specific actions
- Benefits: the positive outcomes of implementing the criteria.

A broad chronological arrangement of criteria is outlined in Figure 4 of this document. Please refer to it for a better understanding of the issues related to each work stage.

For a complete list of criteria and examples please refer to the VSS.



The symbol used as a reference point throughout the voluntary standard to denote the relevant Climate Action criterion.

⁴ See the VSS page 4 for further explanation of this.



photo credit: St Andrews links. The Castle Course, Scotland

Preparation Stage

P1B - Site selection
Stage: Preparation
Level: Baseline
Sustainability Objective:
Appropriate site selection
Performance Requirements
<p>Ensure all efforts are made to:</p> <ul style="list-style-type: none"> • Minimise development of prime agricultural land • Protect land supporting local livelihoods • Engage with relevant local bodies • Protect floodplain capacity • Conserve threatened and/or endangered habitats and species.
Supporting Documentation
<p>Site Selection Statement</p> <ul style="list-style-type: none"> • Justification for chosen site - considering agricultural land status, floodplain capacity and protected or threatened habitats and species. • Explanation of the alternatives considered and why they were not chosen.
Benefits
<p>Selecting the adequate site has many benefits and is possibly the most important decision for any potential golf development. It simply has a knock on effect across the entire process of development from scope and scale of the golf course right through to your ongoing operations budget. Selecting a site excellently suited to golf will make the entire process of realizing and running the golf course sustain significantly easier, cheaper and more efficient⁵.</p>



⁵ See: asgca.org/design/new-courses/site-selection-evaluation/ for more information on site selection

Design Stage - Nature



Photo Credit:: HoiAna Golf Club

Highlight

Location: Han-Golf Oy Ab, Finland

Opened: Spring 2020

Key features: Oil separation unit and biological wastewater treatment unit

DN7B - Maintenance facility design

Stage: Design

Level: Baseline

Sustainability Objective:

Minimise pollution from maintenance facility

Performance Requirements

Early planning for integration of best practice pollution control measures into maintenance facility design

Supporting Documentation

Building Design Statement:

- Design maintenance wash down areas that include pollution control measures.

Benefits

Designating location, size, equipment, storage and layout of wash down areas for the equipment at the design stage of the project will ensure that future operations and run quicker, safer and cleaner throughout the lifetime of the building. Avoiding any contaminated run-off from the maintenance facility can remove the risk of negative impacts upon the surrounding environment.

Design Stage - Resources



photo credit: Irie Fields Golf Club, St Kitts and Nevis

Local materials | Local crafts



photo credit: Rio Olympic Golf Club, Brazil

On site plant nursery



photo credit: Rio Olympic Golf Club, Brazil
Low tech locally sourced path materials

Highlight

Location: Jack's Point Golf Club, New Zealand

Key features: All furnishings made from locally sourced recycled materials such as railway sleepers and driftwood gathered from the lake edge, as well as old wood from local farms. Tee and distance markers are made from dead stems of the Matagouri tree, which is found throughout the golf course property.

DR6B - Local materials

Stage: Design

Level: Baseline

Sustainability Objective:

Use local materials

Performance Requirements

Ensure all efforts are made to:

- Minimise the average total distance that construction materials travel.
- Give preference to on site or locally sourced materials.

Supporting Documentation

Materials Specification:

- List of external materials proposed, including supplier and origin.
- List of key opportunities and challenges involved in sourcing materials.
- Demonstrate how challenges were addressed.

Benefits

Using local sources reduces the overall cost and impact of the project. Further to that local materials often can tie the project closer to the local landscape, its colour and its character. Beyond the site, developing a local supply chain for your project can reduce lead-in times, give a more direct relationship with suppliers and boost the local economy.

Construction Stage - Community



photo credit: Irie Fields Golf Club, St Kitts and Nevis



CC2B - Staff working conditions
Stage: Construction
Level: Baseline
Sustainability Objective:
Provide good staff working conditions
Performance Requirements
Availability of clean, hygienic on site shelters and the provision of adequate sanitation and water.
Supporting Documentation
Construction Compound Plan: <ul style="list-style-type: none"> • Designate areas for workers' shelter and the provisions included.
Benefits
Cleaner and safer workplaces can improve worker morale and motivation, but it can also improve the business productivity. Having space to meet, even informally, can lead to solving on-site issues more effectively. Resulting in a quicker, cheaper construction process whilst improving overall quality.

Highlight

Location: Hoiana Shores Golf Club, Vietnam
 Certified in September 2020

Key features: Establishment of a vocational training college with a 5-year commitment to train individuals, mostly local, who will be given preference in recruitment at Hoiana Shores. Overall, there is a strong emphasis on local skills and expertise at Hoiana, which helps contribute to an authentic experience for golfers and staff alike.

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