MALTA GOLF ASSOCIATION

COMMITTED TO GREEN

RECOGNITION OF GOLF'S RESPONSIBILITIES TO THE ENVIRONMENT IN MALTA

PREAMBLE

The Malta Golf Association is responsible for promoting and communicating, in Malta, the issues and problems concerning the interaction of the game of golf with its environment. The aim is to make the golf course administrators and developers sensitive on these issues and also to improve the image of golf to the outside world.

The golf course and its surrounding environment is very much intertwined and can provide many positive environmental benefits. It is well known that golf courses preserve open spaces and remnant vegetation within urban environments while also providing valuable wildlife habitat. Many degraded sites have also been successfully rehabilitated by the establishment of a golf course, not to mention the potential for courses to act as carbon sinks. An often understated benefit is the sense of wellbeing experienced when out on the golf course. Not only is it a great form of exercise, but for many, the relaxing walk around the golf course and experiencing all its wonders is the major appeal - more so than the challenges of the game. [1]

Although Malta does not have wildlife, rivers or lakes to protect and our trees and flora are sparse when compared to other countries, we still have the responsibility to safeguard other environmental issues and this policy aims to acknowledge these. The vertex of these endeavours is to have a set of working guidelines for sustainable development towards a path that will assist the Club to achieve international recognition for its environmental achievements.

Due to the voluntary set up, the members of the Executive Council of the Malta Golf Association are very much aware that they do not have the necessary expertise or competence to implement a fully pledged environmental policy for golf in Malta. However, the Malta Golf Association, through its affiliation with golf's governing bodies can be a source of information and advice on these matters. More importantly the Malta Golf Association recognises the impact that international, European and national legislation and directives can have on sports in general and golf in particular. These include the Kyoto protocol on energy, EU directives on the use of fertilizers and pesticides, EU strategies on water resources, the associated legislation approved by the Maltese House of Representatives as well as policies in force through the Malta Environment and Planning Authority including those concerning waste, land use and pollution.

[1] Source: Australian Golf Course Superintendents' Association

PURPOSE OF THE ENVIRONMENTAL POLICY

Sustainable development and management of golf courses is all about maintaining a high level of playing performance and a successful golf business whilst protecting the environment and the concerns of wider society.[2]

An appropriate amount of golf in Malta can contribute strongly to the country's economic vitality, social development, sporting excellence and environmental quality. The locality affected by the game of golf needs safeguarding through a properly implemented and well managed plan – this not just for the benefit and enjoyment of present golf members and visitors to our country, but also for future golfing generations.

The general aims of an environmental policy are to:

- Reduce and optimize the consumption of natural resources.
- Improve the planning and maintenance of the golf course.
- Improve the image of golf with the public and the media.
- Show the commitment of golf against environmental issues.
- Promote "Green Tourism".
- Provide all the necessary assistance towards international environmental certification.

The main environmental categories under consideration are:

- Water Resources.
- Biodiversity.
- Landscape & Cultural Heritage.
- Energy Consumption.
- Waste Reduction & Separation.

WATER (including management of turf)

The data on water consumption in the world is provided by the United Nations (UN, UNESCO, and FAO). Worldwide, agriculture accounts for 70% of all water consumption, compared to 20% for industry and 10% for domestic use. In industrialized nations, however, industries consume more than half of the water available for human use.

Freshwater withdrawals have tripled over the last 50 years. Demand for freshwater is increasing by 64 billion cubic meters a year (1 cubic meter = 1,000 litres). Water consumed in 2012 is estimated to top 5,000 cubic metres.[3] Industrial consumption of water is especially important in industrialized countries but in this case the problem is not related to water consumption but to its pollution.

The European Community has issued several directives that protect water resources based on the following principles:

- Water is a limited resource and vulnerable, essential for life, not just man but also for all the ecosystems in nature and is fundamental to the economic and social development.
- Water in all its many uses has an economic value. On the basis of the principle that water is indispensable for life it would be essential to ensure that all people have access to clean water at an accessible price.
- Water is one of the most critical environmental resources with respect to the management of a golf course in terms of both quantity and quality.

[2] Source: The R&A
[3] Source: www.worldometers.info/water

Water management requires the adoption of environmentally friendly farming techniques all aimed at limiting its use and avoid waste. The targets for water would include:

- Water usage that does not come from aqua duct fresh groundwater or surface water bodies, preferring rainwater collected in specific basins, brackish water and water coming from sewage treatment plants or industrial processes.
- Minimisation the irrigation cycles and constantly monitoring the amount of water used.
- Carrying out chemical analysis of irrigation water in order to verify the quality.
- Optimization of the irrigation system in order to reduce fuel consumption by improving the distribution of water on the surface of the course, for example by:
    - efficient irrigation system and automatic programming and electronic control of the sprinklers (individual or adjusted organized sectors);
    - pumping station connected to a control meteorology and/or soil moisture sensors;
    - investigation of the physical-chemical characteristics of the soil;
    - zero or minimal irrigation of rough and between tees and fairways start.
- Creating a network of closed and connected drainage catchment area for the recovery and reuse of rainwater and runoff. Providing also a system of collection and accumulation of rainwater from all facilities such as club house, storage, and any parking.
- Turfing as much as possible in harmony with the natural environment and so reducing consumption of water and chemicals, by means of:
    - using grass species best adapted to local soil and climatic conditions;
    - significantly reducing or cancelling the use of pesticides by the increase in agricultural practices (aeration, verti-cutting, topdressing);
    - reducing and optimizing the use of fertilizers based on the result of soil analysis;
    - performing intermittent standard chemical analysis of soil samples;
    - decreasing areas of high maintenance e.g. reduction of fairways width and length;
    - respecting the optimal correct cutting height and frequency for the prevailing grass species.

BIODIVERSITY

The Convention on Biodiversity, prepared in Rio de Janeiro in 1992, affirms the value intrinsic biological diversity at different organizational levels: genetic, species, landscape. The Convention recognizes that the fundamental requirement for the conservation of biological diversity consists in the preservation in situ conservation of ecosystems and natural habitats with maintenance of viable populations of species in their natural environments.

Survival of each species depends on the variety of populations that compose it. A minor change in the genetics of a population means less chance of survival. The species diversity is the complex of species that live in a certain region. The biodiversity of ecosystems is related to the different environments in which life is present: forest, sea, coral reefs, lakes, underground areas, desert, bogs, etc. The disappearance of these environments carries the risk of extinction of the species that live there. The quality of human existence and the possibility of survival depends on safeguarding the health of the world's ecosystems.

Factors contributing to the loss of biodiversity are:

- Habitat destruction.
- The colonization of new habitats by alien species.
- The rise in temperature.

The main threat to biodiversity is represented today by man. The natural rate of extinction is estimated at about one species per year. The entropic environment, together with deforestation and agricultural practice of monoculture, has raised this rate to 3 species per hour, which means that every hour on the planet three species disappear. The disappearance of biodiversity is due, directly or indirectly, to human presence.

The species that make up an ecosystem are closely linked in a dynamic balance which directs the operation of the same system. When a species disappears the balance is altered. The ecosystem rebalances the loss of a species but if the species that fail are many the ecosystem disappears. Awareness of this has led to the Convention on Biological Diversity. Nations which have acceded to the Convention have committed to find a balance between the production of goods obtained from natural resources and conservation of ecosystems. This approach is called "sustainable development."

Sustainable development, according to the UN, is the economic and social progress which involves improving the quality of life of people in the context of carrying capacity of the system that sustains life on Earth.

The golf course requires the use of extended surfaces within which many habitats (meadows, bands arboreal shrubby vegetation, wooded areas, lakes, rivers and canals) can be re-created or could be potentially present. These habitats, often with accompanying rare species, deserve protection. Compliance with the pre-existing habitat, enhancement of the biodiversity and the correct and harmonious integration of this in landscape are essential to ensure the sustainability of golf.

Furthermore, Malta’s unique history provides a challenge to preserve, conserve and protect buildings, objects or other artefacts of historical significance.

The main opportunities for the conservation of habitats and landscapes could be to:

- Conserve natural areas and pre-existing habitats, particularly in construction phase or modifications/extensions of the course. Provide also setting an appropriate level of protection and conservation of species and rare and environmentally sensitive habitats.
- Create new uncultivated areas or secondary rough where maintenance is null or limited and there is no irrigation, fertilizers or chemical treatments.
- Create new habitats (such as woodland, shrub land, wetlands, dry meadows, etc.), enhancing the natural potential of the area.
- Perform investigations related to flora, fauna and habitats with particular attention to rare and protected species, make a map of the vegetation and habitat and periodically monitoring them.
- In case of presence of species of rare, endemic and/or protected flora, fauna or habitats, provide interventions to enhance their presence or appropriate conservation measures.
- Analyze the ecological network inside the golf course and create or maintain ecological corridors (e.g. bands of arboreal-shrubs) to allow the connection between the different habitats and displacement of species.
- Use native species of trees and shrubs which are ecologically suitable for construction and maintenance of woodland.
- Manage and care hereditary trees, providing a long period maintenance plan on pruning, felling and stability analysis.
- Ensure that any features of historical, archaeological and cultural value are surveyed and assessed.
- Conserve landscape elements, views, buildings and other features of historical, archaeological and cultural value and maximise opportunities to restore the landscape's integrity and enhance its overall interest.

ENERGY

Efficient energy use, energy conservation, development of renewable energy sources, upgrading the electrical system, new high-efficiency technologies, the energy certification of buildings and the use of energy management services are key points of the energy plan that each Club should adopt.

- Monitor annually the electrical consumption, distinguishing clubhouse and course and differentiating the various activities responsible for such consumption.
- Develop the role of renewable energy sources (solar, wind, hydro, geothermal, biomass) to cover the consumption of primary energy.
- Achieve energy savings for summer air conditioning systems (high efficiency, such as heat pumps and cogeneration boilers).
- Obtain the energy certification of buildings, in particular of the clubhouse.
- Implement all the devices which make it possible to reduce energy consumption, such as:
    - electrical and electronic equipment with low consumption (eco-driving to green electronic products);
    - low consumption lamps, photocells and/or timed lights, solar street for night lighting;
    - adequate thermal insulation of the building.

WASTE

Commitment to a green environment also includes waste with the objectives to ensure the protection of the environment and to avoid any danger to human health during all operations and activities related to waste management (collection, transport, recovery and disposal). Waste, in particular those recognized as "hazardous waste", must be stored, recovered or disposed of:

- without risk to water, air, soil, plants, flora, etc;
- without causing a nuisance through noise or odours;
- without adversely affecting the countryside, places of special interest and those protected in accordance to current legislation.

Overall, golf clubs are moving towards a policy of:

- Reducing waste from packaging.
- Reducing the quantity and hazardousness of waste through the purchase of products coming from the development of clean technologies, in particular those that allow a greater saving of natural resources (in order to reduce the flow of waste destined for disposal in landfills).
- Prioritisation towards reuse and recycling of waste including finding ways to recover secondary raw materials from waste.
- Promoting recycling to staff, members and guests through waste separation techniques.
- Careful handling, proper storage and appropriate disposal of batteries, used oil, containers of pesticides, oiled rags, mud deck cleaning, electrical components, copier toner cartridges, printing cartridges as well as waste arising from electrical and electronic equipment.

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Finally to quote Mr Jonathan Smith at GEO "*In a challenging time for the planet, for society and for golf, we are passionate about the fact that embracing all aspects of sustainability is not only the right thing to do, but is fundamental to golf's future success".*

SOURCES FOR QUOTES AND DIAGRAMS

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