



# MONTECCHIA GOLF CLUB

THE “IAGTO SUSTAINABILITY AWARDS 2018” PRIZE GOES TO THE GOLF CLUB WHERE MAPESOIL SYSTEM WAS USED

Montecchia Golf Club, just a few kilometres from the city of Padua, was founded in 1988 and is a prestigious example of Italian excellence on the international golfing scene. The club is on the site of the property once owned by the Count Emo Capodilista family and includes an ancient castle, a splen-

did Renaissance villa and an old farm renowned for the quality of its great wines. The club house is an old building which was once used for drying tobacco, lovingly restored to its former splendour. The course has a total of 27 holes, designed by the British architect Tom Mc-



**INTERVIEWING ALESSANDRO DE LUCA, RESPONSIBLE FOR GRASS SURFACES FOR THE ITALIAN GOLF FEDERATION**

**Can you explain to our readers what your role is in the FIG, the Italian Golf Federation?**

The Italian Golf Federation has its own Federal Technical Centre which, amongst its various activities, also holds training courses for Superintendents, that is, technicians in charge of the construction and maintenance of golf courses. Training is carried out by the Grass Surfaces Section which I have been working with since 1991 and, since 2004, acting as Coordinator. The idea behind starting these courses was based on the assumption that, if a golf course is constructed well and is then maintained correctly, it is possible to optimise its running costs quite significantly, it can have a beneficial impact on the environment and, above

all, improve the quality of play. The Section’s activities, however, are not limited to just training: along with my colleagues (two agronomists and a Natural Sciences graduate), we provide assistance to golf courses, take part in research work in collaboration with various universities and carry out a host of activities aimed at promoting the environmental aspects of golf courses.

**When you visit golf clubs in Italy and around the world, what are the most common problems you encounter with the courses?**

The most important aspect of golf course management is obviously the grass maintenance, particularly that of the greens. A complex setting such as a golf course, however, includes



Cauley (former President of the British Association of Golf Course Architects), and blends in perfectly with the area's typical flat landscape punctuated by the undulating hills of the nearby Colli Euganei Regional Park. The design choices adopted in its construction have led to the creation of a technically challenging course, while at the same paying particular attention to a course management philosophy based on the natural surroundings and environmental sustainability, typical of the British approach to golf.

In fact, a golf club that implements a management policy based on environmental sustainability has numerous different functions: it represents an oasis that helps develop and safeguard the biodiversity and functionality of the surrounding ecosystem, it both buffers and stores drainage water, it helps conserve



Chiara Cappon, Montecchia Golf Club's Marketing Director, and Paolo Casati, the Club's President, receiving the award.

the local landscape, it provides vital green recreational areas within an urban context and it helps preserve natural and economic resources.

From when it was very first founded, Montecchia Golf Club has set an example for its concrete commitment to the preservation and development of natu-

ral resources, as testified by the various environmental awards received over the years: following its two "Impegnati nel verde (Green Commitment)" awards (in 2007 and 2012), in 2013 Montecchia Golf Club was granted the prestigious environmental certification GEO On-Course™, reconfirmed in 2018.

GEO certification represents an important achievement for any golf club and is considered to be a kind of environmental summary of a club. It is awarded by the non-profit body Golf Environment Organization (GEO) which, in collaboration with various government bodies, environmental groups and the academic world, promotes and develops the concept of environmental sustainability of golf courses. Each club in the list of candidates for this severe environmental certification must demonstrate that it complies with a series

many other aspects, such as water systems management, the equipment and machinery available, trees and woodland, the roads and paths network and, as far as the actual game is concerned, the bunkers, obstacles formed by depressions filled with sand dotted around the course. And while we are on the subject of bunkers, it is extremely important that their edges are well defined, their drainage system works perfectly and the sand is always well-raked and clean, which means no growth or foreign bodies such as stones, silt or other unwanted materials. In fact, it is no coincidence that the correct maintenance of these particular surfaces is one of the most challenging aspects.

**After one year since the intervention using Mapei technology, what sort of feedback have you received from your Superintendent?**

It is precisely in consideration of the amount of work required to maintain bunkers correctly that research is pushing heavily towards the development of systems that enable bunker management to be rationalised. This is why this particular issue was included in the "Biogolf Case Study", a ground-breaking project for this sector launched in January 2015 at Montecchia Golf Club, which involves an approach to golf course management that takes into account the requirements of bio-agriculture. Apart from the invaluable support

we have received from Montecchia Golf Club, the research project is being conducted in collaboration with the Grass Surfaces Section of the FIG, the Istituto per il Credito Sportivo (Institute for Sports Credit), the main Italian environmental organisations and the Universities of Bologna, Padua, Pisa and Turin. And in 2016, in collaboration with Mapei and the construction company Battistella Golf, the bunker problem was tackled by testing three different construction techniques with the aim of maintaining the quality of the sand and the efficiency of the drainage system over a period of time. We have been constantly monitoring their condition for over one year, and one of these systems seems to very promising.



**PHOTO 1.** A fine example of typical problems due to inefficient drainage in bunkers.

**PHOTO 2.** Spreading MAPESOIL 50 stabilizing agent.

**PHOTO 3.** Distributing and homogenizing MAPESOIL 50.

**PHOTO 4.** A compacted flow-layer made with native soil available on site mixed with MAPESOIL 50.

of requirements, all of which are then checked by a group of nominated inspectors, that is, that they really do adopt a system of sustainable management which encompasses the surrounding landscape and ecosystems, energy and resources, water, materials and the supply chain, environmental quality and the local community. The virtuous management policy

adopted by the Montecchia Golf Club resulted in yet another prestigious award in 2017, with the Club receiving the "IAGTO SUSTAINABILITY AWARDS 2018" prize during a ceremony held in Cannes in December 2017.

This award is from IAGTO (the International Association of Golf Tour Operators) as recognition of the excellence of golf clubs from all around the world for their commitment to environmental and social responsibility.

Amongst the most significant initiatives implemented by Montecchia Golf Club, and which have played a major role in obtaining this important result, is undoubtedly the "BIOGOLF" project, the first and, until now, the only one in Italy to have adopted a biological approach to golf course management. The project

was implemented on the 9-hole "Yellow Course" and involves an approach to maintenance based on respect for biological agriculture protocols. Numerous Italian golf courses are profiting from the experience gained by Montecchia Golf Club, such as the conservation of the Bermuda grass tees and fairways, a solution that has enabled water and fertiliser consumption to be drastically reduced and the use of pesticides to be completely eliminated.

Many other tests are also currently being carried out in the same spirit and are making progress thanks also to the collaboration of the Grass Surfaces section of the Italian Golf Federation, the Universities of Padua, Bologna, Pisa and Turin, GEO, and the main Italian environmental organisations (Legambiente, Federparchi and Fondazione Univerde).

One of the most interesting of these initiatives is the maintenance of bunkers, that is, the pockets of sand dotted around golf courses that form obstacles during normal play. Since these areas do not have a grassy top surface, it is impossible to keep infestations in check with pesticides and keep the sand clean, which has quite an effect on the game itself and makes maintenance work particularly expensive.

**MAPESOIL TECHNOLOGY**

For this particular problem, under the supervision of the Superintendent, the Mapei Research & Development laboratory has developed a system to improve drainage based on MAPESOIL GF technology. This system has been specifically developed to increase the speed at which water flows away from





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**PHOTO 5.** A flow-layer made up by applying the MAPEPLAN PE sheet.

**PHOTO 6.** Downloading MAPESOIL GF draining mix onto the bunker area.

**PHOTO 7.** Laying the drainage mix made up of VG SPORT GU 6 and MAPESOIL GF.

**PHOTO 8.** A detailed view of the drainage mix prepared with MAPESOIL GF.

## IN THE SPOTLIGHT

### MAPESOIL GF

It is a high-performance powdered hydraulic binder used to build drainage layers on golf courses. It can be used to build drainage systems in and around bunkers, as well as drainage systems for natural, hybrid and artificial grass playing surfaces and drainage and water storage systems to qualify for GEO OnCourse™ certification of golf courses. MAPESOIL GF is a powdered, cementitious-based binder with special additives used in place of normal cement to batch conglomerates with high mechanical properties while maintaining a high level of permeability for playing surfaces. The high infiltration rate of sub-based made from MAPESOIL GF allows water to drain off quickly from surfaces, such as the sand in bunkers. Unlike traditional drainage systems, drainage sub-bases made from MAPESOIL GF allow all the water that reaches for surfaces, such as bunkers, to be recovered evenly and continuously.



surfaces and, at the same time, maintain the characteristics of the layer of sand, thereby reducing maintenance costs for the club.

The system involves the installation of a highly permeable blanket of MAPESOIL GF over the entire surface of the bunker, made from a mixture of gravel and a high-performance cementitious binder, which leads to a high level of volumetric stability, good mechanical properties and durability. This mixture is usually applied over a “flow-layer” made either from waterproofing sheets or by stabilising the soil with MAPESOIL 50, if unstable.

The high porosity of the MAPESOIL GF mix allows water to run off more quickly following a vertical direction if there is a sudden rainfall, thereby reducing the risk of the sand being leached and reducing maintenance costs to restore the bunker to its original condition. Also, the presence of a flow-layer below the permeable MAPESOIL GF surface drives all the water (both rainwater and irrigation water) towards the central collection point, so that the club can eventually recycle the water and use it for irrigation purposes.

Upgrading of the bunker area is completed by spreading on a top layer in variable thicknesses of clean, calibrated VG SPORT SU 2 silica sand by Vaga

Srl, which is compliant with the requirements of the USGA (United States Golf Association) adopted all around the world.

Vaga Srl, a subsidiary of the Mapei Group, in compliance with the specific requirements of all those operating in the landscaping sector, also offers a complete range of graded, calibrated aggregates, VAGA SPORT, certified for the construction and maintenance of grass playing surfaces, the key element in the game of golf.

Once again, choosing quality construction materials and cutting-edge, sustainable solutions, such as those offered by Mapei and Vaga, has been rewarded.

**Elisa Portigliatti.** Mapei Corporate Product Manager, Sport Line

### TECHNICAL DATA

**Golf Club della Montecchia,** Montecchia (Italy)

**Period of construction:** 1988-1990

**Year of the intervention:** 2016

**Intervention by Mapei:** supplying products for the drainage system of the bunker

**Superintendent:** Brian Og O’Flaherty

**Main contractor:** Battistella Golf Srl

**Mapei coordinators:** Marco Cattuzzo and Elisa Portigliatti, Mapei SpA (Italy)

### MAPEI PRODUCTS

Completing a drainage system in the bunker: Mapeoil GF, Mapeoil 50, Mapeplan PE\*, VG SPORT GU 6\*\*

\*This product is manufactured by Polyglass, a subsidiary of the Mapei Group.

\*\*This product is manufactured by VAGA, a subsidiary of the Mapei Group.

For further information see [www.mapei.com](http://www.mapei.com)