

Innovations for clean water



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Practical Report Golf course

18 holes on lots of coal

How the "Schwarze Heide" Golf Club under blue skies, above black mining gold and surrounded by - almost - untouched nature, treats its wastewater in an exemplary fashion...

Bottrop-Kirchhellen: the Schwarze Heide Golf Club is located in the immediate neighbourhood of the "Kumpels" (German: pitmen) from the coal seams and in reach of the steel area architecture. From 1986 the registered club has developed successively and with the help of experienced landscaping experts a golf course from the pastureland of the one time farm which was to meet both the visual and ecological criteria. And if a glance did not now and again rest on the industrial monuments of the Ruhrgebiet landscape... – one would almost feel as if one were in a Westphalian orchard.



**Report & Photos:
Uwe S. Meschede**



Putting green is what the golfers call the training green which is designed to correspond with the characteristics of the actual course, the greens. Here one practices so-called putting, holing out, the most important shot in golf.

If, as a non-golfer, one hears somewhere or other about Par 3, 4 or 5, about handicap, fairway or driving range then their hair starts to stand on end! To begin with! Because – once one has spent a day on the golf course one understands something very quickly: with most golfers one is actually not very concerned with the prestigious sport but rather more with a deliberate reduction of stress and pure relaxation – without idling about, without having to do nothing, without any guilty feeling with regard to responsibilities. And:

... to be able to forget rapidly the daily irritations and tasks in pleasant surroundings.

"If this is the case", suggests Michael Beck, President of the Golfclubs Schwarze Heide Bottrop Kirchhellen e.V., as the club is officially called in German, "then we have in any case achieved our aim!".

Nevertheless the path to this point was not completely simple and on many occasions rather stony. It all started in 1986 as one or two interested

parties gathered around golf fan Dieter Brauchmann and founded the Schwarze Heide Golf club. Today's golf course was then no more than an old piece of pastureland and the holes originated less from golf and rather more from the cows grazing there. Subsequently and with a great deal of self-initiative and a lot of effort the first 9-hole course was created. Still, as the club became known and with the broad establishment of golf as a sport both the number of members and the de-

mand on own possibilities grew – we must have more holes!

No sooner said than done. The landscape planner Peter Drecker was tasked to convert the 9-hole course into one with 18 holes. His concept, to integrate the golf course into the original cultural farming landscape and to meet the aims of nature conservancy and care of the landscape, was incorporated and was turned into reality in 1993, "A Westphalian orchard" was then and still is today the model for the course.



The Club Board in the area of the entrance to the golf course welcomes the guests and wishes them a happy stay (Photo above, left) in the middle of this glorious nature, which is also designated as water protective zone. For this reason the local authorities also have a special eye on the treatment of wastewater, above all on the clubhouse restaurant (Photo, centre). Following strictly controlled treatment of the wastewater it is fed into the pond opposite the restaurant (Photo below).



When the club finally planned the new clubhouse with changing rooms for the in the meanwhile over 850 members, administrative rooms, a restaurant with fastidious kitchen as well as comprehensive services for 2003, the authorities of the Rural District pricked up their ears! Prerequisite for the approval of the new construction was the absolute integration into the – more or less – untouched nature. That meant for the club: the wastewater from the clubhouse also had to be treated adequately.



As the new clubhouse was far outside the municipal sewer system but in the middle of the water protective zone for the area, a proper solution for the wastewater produced was required. First the installation of a grease separator solved the problem of the highly loaded wastewater from the gastronomic activities. Although the residual wastewater from this as well as the wastewater from the remaining wastewater producers in the clubhouse now flowed together into a central drain, up to the location of the wastewater treatment plant there was, however, still a distance of some 50 metres to be overcome; an appropriately powerfully designed pumping station finally took on this

At the edge of the area lies Bottrop and its suburb Kirchhellen. The pleasant locality is well-known less for its beautiful golf course than for its large recreational park which was opened here several years ago.



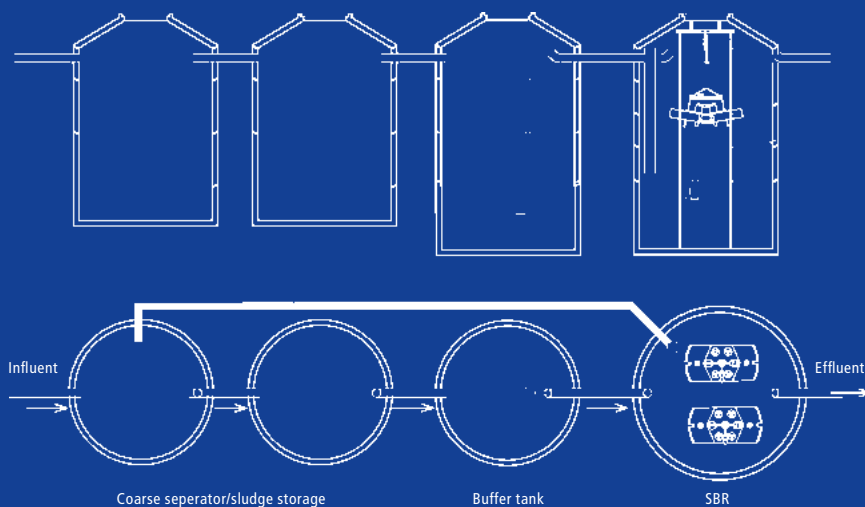
It is about 50 meters from the central drain in the cellar of the clubhouse out to the tanks of the AQUAMAX® XL-1-75 PT (Photo above). A high performance pumping station here takes on the transportation of the wastewater.



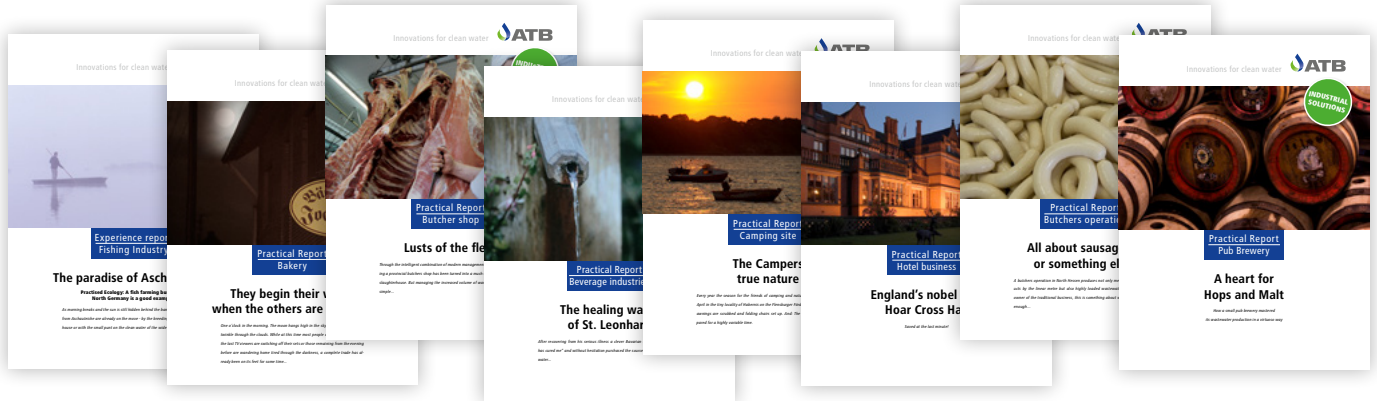
task. Now it was a matter for the treatment technology to ensure that the complete wastewater produced should be discharged into the neighbouring pond of the golf course after successful treatment. Due to the enormous variations between workdays and weekends, on which often tournaments also take place, the heavy loading of the plant during the season from spring through to autumn as well as the high demands on the part of the authorities, investment was made in a plant technology which, even in extreme cases, offers a high operational security: AQUAMAX® XL up to 75 PT. The associated control system regulates the plant fully automatically. With this concept the Schwarze Heide Golf Club has created a solution for its individual wastewater problem which is not only matched to today's requirements but which has also taken into account a possible expansion of the club in the future. Finally, the AQUAMAX® XL plant with its "aerator island" is built not only modular and very flexible, the AQUAMAX® building block system also allows an expansion to meet own or even future legal requirements without problem – from nitrogen and phosphate removal up to the production of process water.

The golf course project at a glance:

Owner	Golf-Club Schwarze Heide Bottrop-Kirchhellen e.V.
Project management	Rhebau GmbH & Co.
Plant size	AQUAMAX® XL-1-75 PT
Costs of plant technology	Ca. 11.000,- € (Retrofitting)
Commissioning	October 2003
Required treatment performance	COD < 150 mg/l BOD ₅ < 40 mg/l
Effluent values	COD < 85 mg/l BOD ₅ < 30 mg/l



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