US-UK study: It is greener on the other side of pond

By ANDREW OVERBECK

SANTANA ROSA, Calif. — The top American golf courses earn twice as much and spend twice as much on maintenance as their U.K. counterparts, according to a survey by novice architect Bettina Schrickel.

Following a year comparing the maintenance practices of 25 of the top golf courses in both the United States and the United Kingdom for her graduate thesis in golf course architecture at Merrist Wood College in Surrey, England, Schrickel has published the findings of her study.

"Some of the numbers really surprised me," said Schrickel. "For example, the large gap between the financial income of the clubs, the maintenance budgets and the number of greenkeepers."

Of the American courses that she visited, the average income was $2 million, the maintenance budget was $970,000 and the number of greenkeepers was 18. Comparably, U.K. courses had an average income of $800,000, a maintenance budget of $340,000 and an average of eight greenkeepers. Further details on page 18.

Simpot to buy Turf Partners

By A. OVERBECK

RANCHO BERNARDO, Calif. — Eco Soil Systems Inc. has accelerated its original February deal to sell the assets of its Turf Partners subsidiary to Post Falls, Idaho-based J.R. Simplot Co. Instead of buying $20 million of convertible Eco Soil stock and en-

Certification the goal of CMAA envl audit

By PETER BLAIS

ALEXANDRIA, Va. — Audubon International (AI) hopes to develop a certification program within the next 12 months for clubs, club man-

SubAir & Soil Air do patent combat in court

By MARK LESLIE

SYRACUSE, N.Y. — A battle about patents — spiced with added allegations of fraud, misappropriations and false advertising — will begin to be played out in U.S. District Court here in June between SubAir Inc. of Munnsville and Soil Air Technology of Middlefield, Conn.

The skirmish revolves around technology developed by Ferris Industries and its subsidiary, SubAir Inc., start-

U.S.-UK study reveals differences in chemical, water use

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Ship fees in the United States averaged $4,300 versus $1,300 in the U.K. Schrickel also found that American courses consume more fertilizer, herbicide, fungicide, insecticide and water than their British counterparts.

"I found that the financial income of golf clubs in the U.S. is three times higher, even though they have fewer members," said Schrickel. "U.S. members pay more because they can experience more — there are usually country club facilities whereas on British courses there is only golf." Schrickel said private golf members in the United States also expect "carpet-like" turf conditions.

"This is influenced by the fact famous British courses are older and they are preserved for their historic character," she said. "For example, Sunningdale in England will never be as green as East Lake Golf Club in Atlanta. The course is in absolutely great shape, but the natural character of the old heathland determines the appearance."

Another factor that drove up the cost of maintenance at U.S. facilities was irrigation. Schrickel found that only 4 percent of courses in the U.K. are irrigated entirely, whereas 60 percent of the courses in the U.S. are.

"The courses that are in desert climates are the most expensive to maintain," said Schrickel. "Water certainly pushes up the costs. For example, Troon Golf and Country Club in Scottsdale they only irrigate the playing areas and they have turf islands in the desert. This means that all the edges of fairways have to be cut regularly to control the speed of growth. Sure, a perfect irrigation system is a large investment, but the course also demands high maintenance."

Schrickel noted that some courses in the U.K. are emulating the U.S. style of maintenance.

"Courses that are designed by American architects are maintained in the American style because that is what the developer wanted. London Golf Club, which was designed by Jack Nicklaus, is in comparable condition to those in America," she said.

Environmental activities also differed greatly between the two countries. While 60 percent of the U.S. courses are members of an environmental accreditation scheme, only 8 percent of U.K. courses are involved.

"In America the courses are greener, but the out-of-play areas are more natural than in the U.K.,” said Schrickel. "In the U.K. they feel that they already protect the environment and that their money would be better spent on turfgrass management than on bird houses."

How has all this information affected Schrickel’s perspective on golf course architecture?

"The whole study made me analyze again what I should really consider in order to create easily maintainable golf courses," she said. "This was a learning process. I may have already known all of this, but I have become more aware of the importance of certain design principles."

Schrickel’s design principles for an easily maintained golf course include:

• Generous surface sizing of greensites to moderate wear and tear.
• Spacious tees to allow for turfgrass regeneration.
• Consistently wide walk-ons and walk-offs.
• Limited bunker placing to moderate maintenance costs.
• Simplified irrigation systems.

But what if the developer wants flashy, deep, steep-faced bunkers?

"This is the ideal. Architects should consider all of these principles when building a golf course," she said. "But if a developer wants flashy, deep, steep-faced bunkers?"

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— Bettina Schrickel

U.S. versus UK study

Continued from previous page

"We would need to talk about who the target group is, who would come and play. I think that many developers still have the opinion that only a long golf course is a good course. Even championship layouts do not have to be par-72," she said.

"For a pay-and-play course it is much easier to break 80 on a par-70 course. It is the encouragement of the golfer and repeat play that we should work towards." Schrickel is now working on putting her design ideals into practice. She is now a design associate with Golfplan/England and will be heading to Texas in the near future to work on a project.

Comparison of courses in the U.S. and British Isles

<table>
<thead>
<tr>
<th>U.S. courses</th>
<th>British courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>maintenance budget/year</td>
<td>970,000 USD</td>
</tr>
<tr>
<td>% of club income</td>
<td>43%</td>
</tr>
<tr>
<td>No. FT / PT crew</td>
<td>18 / 6</td>
</tr>
<tr>
<td>No. sand bunkers</td>
<td>70</td>
</tr>
<tr>
<td>Annual fertilizer use</td>
<td>20,000 kg - used on 100% of courses</td>
</tr>
<tr>
<td>Annual herbicide use</td>
<td>122% of courses</td>
</tr>
<tr>
<td>Annual fungicide use</td>
<td>90%</td>
</tr>
<tr>
<td>Annual insecticide use</td>
<td>105%</td>
</tr>
<tr>
<td>Use chemicals for water irrigation/number sprinkler heads</td>
<td>48%</td>
</tr>
<tr>
<td>Member of environmental accreditation scheme</td>
<td>Audubon Cooperative Sanctuary Program, Safe the Wildlife</td>
</tr>
</tbody>
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**Comparison of Courses**

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