By ANDREW OVERTICK

GRANBY, Colo. — Tripp Davis and PGA Tour professional Craig Stadler have teamed to bring what they call "Scottish, heathland-style golf" to the mountains of Colorado. Their course at Granby Elk Ranch & Club opened Aug. 30 and is the centerpiece of the $420 million, 437-acre resort community located 85 miles north of Denver.

For a mountain course, Grand Elk is unique. It sits in the Fraser River valley at 8,000 feet in elevation but the land is relatively flat.

"The entire back nine is down in a river valley, so it is low profile," said architect Tripp Davis. "The front nine has some elevation change and has a little more movement. There are not a lot of trees and there is a lot of scrub out there. It reminds me of the heathland courses outside London."

Although the land was relatively flat, construction of the layout was anything but easy. Niebur Golf, which is a partner in the project, built the course.

"When we came on in April 2001, nine holes had already been rough shaped by a previous developer," said Davis. "So it was kind of a design-and-build project. We had to deal with numerous wetland issues as they came along. But this was as quick as I have seen a course built, especially considering the environmental issues that we had to deal with. We had to restore 25 acres of wetlands."

Stadler, who visited the course numerous times and met regularly with Davis to discuss the design, continued on page 14

Transforming brownfields into green links

By THOMAS FRALICK

BUFFALO, N.Y. — Contaminated industrial properties or hazardous waste sites often sit idle and abandoned for years in urban and suburban areas around the country. The restoration of these sites, called brownfields, to an environmentally acceptable state must conform to rigid federal and state standards. While such projects can prove costly and time-consuming, they offer tremendous opportunities.

In addition to environmental restoration, there are also economic benefits derived from the conversion of a brownfield. For example, these properties are less costly to acquire if one is seeking an area to be developed into a recreational facility such as a golf course, and brownfield properties often include large parcels of land that are difficult to come by in urban settings. In addition, most states provide monetary incentives and in some instances even grants for brownfield projects.

As a consequence, there has been a recent trend to convert these properties into recreational facilities, particularly golf courses. The development of brownfields into golf complexes offers many advantages, including substantial environmental and economic benefits. Cleanup criteria are less stringent for recreational areas than for residential use. Zoning issues are also eased. If the property is in an urban setting, the creation of green spaces is usually well-received by planning boards. Finally, turning an idle piece of industrial property into a golf facility adds commercial as well as recreational value to a community.

BROWNFIELDS VS. GREENFIELDS

The main difference between a normal parcel of land (sometimes called a greenfield) and a brownfield is the presence of regulated substances in the soil or groundwater. These substances are generally chemicals that were used in an industrial process or the waste products that remained and were determined to be harmful to human health or the environment.

Therefore, before the property can be restored, the nature of the substances and the degree of contamination must be determined and any risks mitigated. The approach

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Hazardous waste to water hazards

CLARK, N.J. — The Hyatt Hills golf complex recently opened on the 87-acre site of a former General Motors bearing plant that had been in operation since 1938. URS Corp., retained by General Motors, began decommissioning the facility in 1987 for conversion to a golf course and recreational facility. The first step was the preparation of a site investigation work plan to determine the extent of contamination for the groundwater portion of three build-ings totaling more than 1.2 million square feet. The investigations uncovered...
used to determine how to clean up the site; establish environmental remediation follows the same basic steps:  
- characterization of the site, including a description of its physical properties, sampling and analysis of soils, surface water, groundwater, sediments, and other media suspected of having been contaminated; risk assessments for human health and ecology; and identification of applicable, relevant and appropriate requirements; 
- remedy selection, which is the process of determining which remedial measures, if any, are required to meet clean-up levels; 
- remedial design, which follows the selection and approval of a remedy and provides the plans and specifications a contractor will follow; 
- construction of the remedy by the contractor; and operations and maintenance, which includes the tasks needed to ensure that the selected remedy operates as anticipated.  

SAVINGS IN COST AND TIME  
Because the regulatory criteria associated with the development of a golf course are less stringent, remedial costs and the time required for completion of the environmental remediation process can be greatly reduced. However, the fact that clean-up criteria are more easily met does not mean that the clean-up level is lower; it merely indicates that there is a restriction on the use of the property that allows a different risk model to be used. If the site is to be used as a driving range rather than for residential purposes, for example, a cap can be designed into the development plans that would achieve the necessary separation. The contaminated soil could be placed under a parking lot or a clean soil cover with the driving range built on top. In such an instance, the construction of the golf facility would be an efficient and cost-effective remedial action. While the expense of remediation is included in the cost of constructing the driving range, the total construction cost will likely be 10 to 20 percent higher than normal. However, the added expenditure will be offset by a lower purchase price for the property or absorbed by an owner who was under an order of consent to clean up the site.

Turning hazardous waste into water hazards  
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Walkability  
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Directly on the Atlantic Ocean shore, while the remaining eight traverse surrounding marshes and dunes. Tommy Cuthbert, Kiawah's director of golf, called many of the changes "substantial," but also pointed to the less obvious changes Dye suggested to draw more walking players to the course.  
"Many subler changes, including enlarging tee areas to better handle players and caddies and creating walking paths, will make the Ocean Course a much more walkable venue," he said. Players will be charged $40 per bag plus gratuity for the caddie service, which complements Kiawah's longstanding forecaddie program to accompany riding players.  
Dye originally designed the Ocean Course in 1991 to host the Ryder Cup. It is one of five courses located at the Kiawah Island Resort. The remaining four were designed by Jack Nicklaus, Tom Fazio, Gary Player and Clyde Johnston.  

Grand Elk opening  
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said the resulting layout offers a good test of golf.  
The front nine is more like a ranch-style course and the back nine is shot-to-shot, point-to-point nine with lots of wetlands," he said. "It plays fair, but when the wind comes up the course is damn near impossible from the back tees." According to Davis, Stadler was very involved with the design concept. "He made philosophical suggestions," Davis said. "He liked smaller greens with a little less movement and wanted play around greens to be more varied. So we have a lot of clipping areas around greens. It is a shot-maker's setting."  
The resort-style course also features bunkers that are backed off the greens, and all par-5s are reachable in two.  
"You will have to hit a very good shot to make eagle through," Davis said. "Because the greens on the par-5s are smaller and have more movement."  

GROW-IN CHALLENGES  
In addition to the wetland issues, Colorado's harsh weather conditions this year challenged the grow-in schedule. The layout has bluegrass tees, fairways and roughs and Dominant bentgrass greens.  

Craig Stadler was "very involved" with the design of Grand Elk, according to architect Trop Davis.  
"This spring it was cold and windy and we couldn't get the soil temps up to where they needed to be to start germinating grass," said superintendent Greg Chambers, who oversaw the grow-in and will handle the ongoing maintenance at the club. "This summer has been really dry and windy, which has made things interesting. It has been hard to irrigate because the wind is blowing so hard that the irrigation isn't even hitting the ground."  
The hard work has paid off however, and the surrounding town property is humming with activity.  
Grand Elk LLC has already notched $12 million in home lot sales in its initial offering and is building 26 cottages near the clubhouse to serve as the property's four-star hotel. The developers are also considering building a second higher-end 18-hole facility on property.  

Customers who purchase home lots at the four-season resort receive a golf membership, use of the clubhouse facilities, use of pontoon boats at the resort's $35 million marina on Lake Granby, two annual ski passes at Sol Vista or Winter Park, and use of the club's Alpine Club at Winter Park.  

Transforming brownfields  
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Shouldn't your Grounds Crew look as groomed as your greens?  

Golfing and Grooming  

Hyatt Hills Golf Club was built on the site of an old GM plant in Clark, N.J.  

Thomas Fralick is project manager for URS Corp., located in Buffalo, N.Y.