



Left: A newly built home at Bundoran Farm surrounded by open space and working farmlands.

## Preservation Farm Development: A New Approach For The Future

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Typical Signature Program members are projects developed on land historically used for farming and other rural purposes. But when Qroe Farm Preservation Development™ (QFPD) showed interest in the Signature Program for their Bundoran Farm project, we found ourselves talking about a concept unique to all other Gold Signature projects that we have been involved with around the globe. Qroe sought to include working agriculture as an integral part of their development project.

Qroe was created thirty years ago by the late Robert Baldwin as a concept where eighty percent or more of a farm, forest, or other environmentally important land is preserved alongside residential space. The result is a guaranteed balance where substantial amounts of preserved farmlands and green space is permanently protected while enhancing value to

both the homeowner and the surrounding municipality. The concept is a new kind of development for Albemarle County with an innovative plan that includes a set of controls and legal relationships that forever bind farmer, homeowner, and community.

Bundoran Farm lies in southern Albemarle County, Virginia, about 20 minutes southeast of Charlottesville, along the upper branches of the Hardware River and is one of the largest and most beautiful privately-held farms in the county. Of the 2,300 acres that comprise this working farm, about 1,100 acres are rolling pastures, 1,000 acres are covered with mature Piedmont forest, and 200 acres are orchards yielding Romes, Granny Smith, and both Red and Golden Delicious apples. The farm is home to well-bred livestock including cattle and Belgian draft horses as well as a wide variety of

native wildlife plus miles of equine trails and carriage roads.

The linchpin of Bundoran Farm's approach to land development and preservation is the innovative easement system which preserves approximately ninety percent of the farm's acreage. The property contains three distinct, yet interrelated, zones:

- **Farmbelt Zone**—includes much of the pasture and open fields. Maintaining these large contiguous areas of farmland preserves the visual character of the Albemarle County countryside. Activity here is restricted to growing crops, planting orchards, and grazing horses and livestock (excluding swine). Events celebrating agriculture, such as the county fair are also permitted in these areas.
- **Greenbelt Zone**—represents about half of the property's total acreage. It includes ponds, streams, and forest of native Virginia hardwoods. These are managed to maintain their natural beauty, protect habitat for wildlife, and to promote recreational pursuits such as hiking, hunting, and horseback riding.
- **Homesites**—Bundoran Farm's more than 100 individual homesites, nestled in the seams between farm and forest, make up the third zone. Each homesite offers expansive views of forest, streams, and rolling, open fields. The working farm is not in any way compromised by the residential areas but rather is enhanced so that this land, under cultivation for centuries, can remain productive in perpetuity. The master plan identified carefully selected homesites that share both protected

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## Celebrating Wildlife

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green belts and active farm lands with the goal of connecting residents to nature, to the farm, and to each other—all accessed by common lanes and private drives. Views, orientation, topography, access, privacy, and vegetation are all elements that influence the siting and design of individual buildings.

This system offers an innovative development scheme that allows homeowners to buy their dream house while preserving the working farmlands and open space that brought them there in the first place. Farmlands and ecologically important landscapes are preserved by those who are living in the midst of them and benefiting daily from them.

### **Selling Points of the Preservation Farm Approach**

1. The marketplace has proven that the QFPD concept has value. Rarely can an individual buy land on the periphery of a development and know that the view will be preserved, that the passing stream will remain pristine, or that the neighboring farmlands will remain as such.
2. QFPD properties have proven that people are willing to spend relatively more on initial land costs in order to acquire, and, thereby preserve, community-held farmlands and open space.
3. This investment into the property has been shown to pay for itself many times over. The positioning of residential units within green-belts and farms leverages the significant added value attainable from that open space.
4. Easements are a crucial element in creating and protecting the value of Qroe Farm properties. The properties integrate mixed human land uses into the natural environment in such a way that each user feels fully immersed in the natural environment that surrounds them and in the community it creates.
5. Qroe Farm makes use of private easements to accomplish land protection as an integral element of the living community. These easements—generated with the agreement of all members of the community, in addition to an outside regulatory body—preserve agricultures, including forestry, and environmentally-sensitive lands in perpetuity.

### **Best Management Practices Employed**

The Bundoran Farm team took a number of important steps to reduce environmental impact as it installed the development's infrastructure. Many of the new roads follow existing farm roads and paths where possible, minimizing both grading and clearing of forest. New roads were kept to the edge of the large pasture and forest areas to avoid fragmenting these resources. The fully engineered roads meet the county's specifications but with their texture and relaxed, stabilized shoulders, will look more like the scenic country roads that typify southern Albemarle County. Instead of blasting through hills, the roads dip and curve with the land. The crossing of major streams and water courses are achieved with bridges or open-bottom structures rather than culverts. This approach preserves the important riparian wildlife corridors.

Cattle degrading stream quality was of utmost concern. So Bundoran submitted and received a grant in partnership with Virginia Tech and the Virginia Environmental Endowment (VEE) to conduct research on alternative cattle management strategies for water quality. The title of the study is "Reducing the Water Quality Impacts of Livestock Grazing." The study basically uses three similar



The stream exclusion area setup at Bundoran Farm created in partnership with Virginia Tech and Virginia Environmental Endowment was implemented as part of their cattle management program to improve water quality.



As a result of the on-site review of Bundoran Farm on April 29, 2009, it became the first Certified Gold Signature Sanctuary in the State of Virginia and the first working farm to be so designated.

(and adjacent) watersheds within the lower Bundoran tract to research the benefits of both total stream exclusion and alternative methodologies. One stream is being used as a control, and will be fully accessible to cattle; one will receive total exclusion; and the third will have an alternative strategy. Best management practices that were implemented for their cattle management program include hardened access crossings, stream exclusion (for the cattle) and management of buffer zones, alternative water sources, and culvert replacements, as well as repair of eroded areas. The goal is to ultimately improve water quality and provide wildlife corridors.

Within Bundoran Farm property, there are three large patches of kudzu. Kudzu is one of the most common and troublesome weeds of rights-of-way, power lines, roadsides, and forests, and now invades an estimated 7,000,000 acres in the southeastern United States. Growing as much as one foot a day, it is common for this weed to completely overgrow all trees and other vegetation once it is established in an area. One of the patches on the Hightop Tract of Bundoran covers an estimated 20 acres. In an attempt to control this patch, staff installed approximately

1 mile of electric fence through the forest around the area then turned 47 cattle loose on the Kudzu. In four days, the cattle had eaten ninety-five percent of the Kudzu within their reach. Staff plans to continue seasonal short term grazing of the kudzu over the next several years in an attempt to eradicate this invasive plant. While it will certainly take a few years to eradicate in this manner, as long as they are persistent in knocking down the new growth, the vines will eventually die off.

#### Management Regimes for Wildlife

Bundoran staff began installing several miles of fencing in 2008 to separate the residential activities from the farming operations and to protect vital water resources from the ill effects of the cattle. They are also taking the opportunity to use this to improve wildlife habitat and open new wildlife corridors. In many areas, they are creating edge habitat between the forest and fields by pulling the fence away from this zone. Since the zone will provide both food and shelter, they expect to see more quail, rabbits, and songbirds. Where appropriate, these areas will be put on a two-to-three year mowing cycle, perpetuating the edge habitat.

Another form of management was implemented to enhance a portion of a large wetland area on a farm area of Bundoran called the Carpenter Farm. Bundoran staff excluded cattle from the open field area and planted shrubs and trees in order to revert it to a forested wetland. Additionally, several stream tributaries have been fenced in order to establish a forested buffer along these streams. The goal here is to benefit and increase the connectivity across areas that now have no true wildlife corridors. As part of this restoration project, the emergent wetland was planted with a variety of native trees and shrubs.

What was especially rewarding for this farm girl from Kentucky in reviewing the property was to see the meshing of the new concepts with the tried-and-true, to view the preservation of a rural setting, and to see the opportunity for all involved to benefit from this innovative type of development. Bundoran Farm's development process will go on for many years to come but the result already is a remarkable demonstration that when a project is sensitively and thoughtfully designed, wildlife and people, farming and forestry, natural and built environments can all live together harmoniously. ●