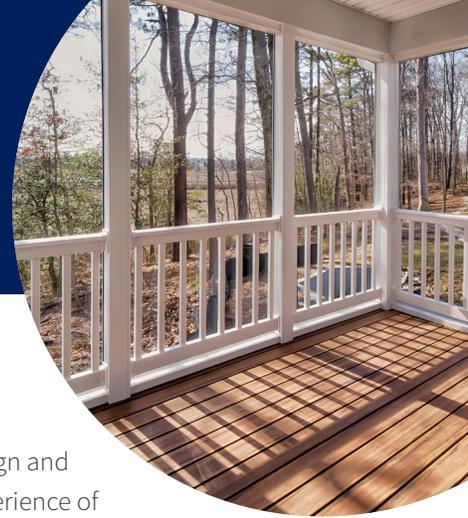


Wharton's Bluff Case Study



Project Information

Level of Certification: Four Stars
NGBS Certified

Location: Millsboro, DE

Size of Site: 10.44-acre infill site

Site Details: 43 waterfront townhome lots and 6 non-waterfront townhome lots

Year Site Development Began: 2010

Project Team

Developer: Christopher Companies

Designer: Craftsmen Developers

Verifier: Landmark Engineering

Meaningful Partnerships: Sussex

County Conservation District,
Delaware Department of Natural

Resources and Environmental
Control, U.S. Fish and Wildlife Service

Key Features

Innovative Practices:

- Walkways, bikeways, street crossings, and entrances designed to promote pedestrian activity are provided.
- New buildings are connected to existing sidewalks and areas of development.

Trees and Vegetation:

- Landscape plan stipulates all trees onsite will remain.

Specifics

The riverine ecosystem and topography in Millsboro, Delaware, were used as sources of inspiration during design and development of Wharton's Bluff. Due to the extensive experience of Craftsmen Developers with site development in the Mid-Atlantic region, priority was placed on being sensitive to the local ecosystems and strict regulations of the area. Craftsmen's careful planning in collaboration with local environmental groups successfully minimized the impact of construction, improved the health of nearby wetlands, and created a bald eagle habitat on the site. With these features and more, Wharton's Bluff became the first development on the East Coast, and the fourth nationwide, to receive the National Green Building Standard Four-Star rating.

By meeting Delaware's minimum requirements for stormwater management in the Indian River watershed, Craftsmen was able to meet many of the goals of the NGBS. The designs included a robust stormwater management plan, new roads following the natural topography, extensive sediment traps during construction and clustered development to minimize the impact on the surrounding wetlands. Craftsmen was able to work with the Sussex County Conservation District (SCCD) to incorporate best practices during design and construction. This helped them to better understand the sediment disturbance ordinance and to design appropriate sediment traps.



Unit Exterior

Key Features Cont.

Stormwater Management

- Impact on Indian River and surrounding wetlands were mitigated via an extensive infiltration system and sediment traps.
- Stormwater management plan includes bioswales and roof-water recovery system.

Sensitive Areas:

- Wetlands on three sides of the site, with an extra area set aside as a wildlife conservation area.
- 50-foot plus buffer around entire site acts as a wind break.

Soil Disturbance:

- Common trenches are used for electric, phone and cable lines. All of the electric lines are installed using directional boring to minimize disturbance.
- Sediment traps, silt fence and infiltration basins were installed in compliance with local conservation district regulations.

Wildlife:

- Study conducted by Biological Research Associates for US Fish and Wildlife to determine if preserved area would sustain a bald eagle habitat.
- Several large nesting trees along the Indian River were left in hopes of attracting other birds.

Slope Disturbance

- All roads are aligned with natural topography to reduce cut and fill.



Unit Interior

The proximity of the wetlands and the Indian River made stormwater runoff and sediment disturbance of particular concern, especially during construction. Perimeter controls, filter cloths, and infiltration trenches behind each building were put in place at the beginning of site development. Working with the home builders, Craftsmen also pre-excavated all building pads and built nine strategically placed sediment traps.

A site's natural habitat and amenities can be used as an effective marketing tool to future homeowners. With this in mind, Craftsmen reached out to the U.S. Fish and Wildlife Service (USFWS) to gauge how development should proceed when a bald eagle nest was found on the site. USFWS was clear that the area where the eagles were spotted could not be developed at all, so Craftsmen delineated a habitat and nature preserve area in an allocated space on the site. USFWS guided Craftsmen throughout the process, providing aerial photography of the new limits of development and answering questions. The nature preserve has been one of the most important marketing features for Whartons Bluff and has helped increase property values.



Site Plan

All information in this case study was provided by one or more members of the project team.
 For information on certifying your project to the NGBS, visit homeinnovation.com/green