



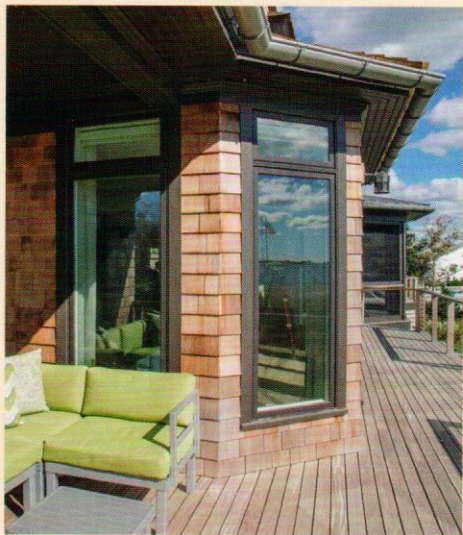
TOP
WOMEN
TO WATCH IN
SUSTAINABILITY

Kim Erle

Sunset Green Home

“If I don't do something about climate change,
then who else will?”

says Kim Erle, whose house was destroyed by Superstorm Sandy in October 2012. This experience provided Erle with the motivation to launch Sunset Green Home LLC, which, she says, “gave me a new sense of purpose.”



(Top) The home aglow with the light of energy efficient LED fixtures

(Bottom) Impact resistant hurricane glass used throughout the home

Born out of the havoc wrought by Sandy, the company's first project was the replacement for the home Erle lost in the storm, a LEED-registered project that is seeking LEED Platinum certification upon completion. Erle says that "I took the skillset I honed as a Wall Street executive and former partner in a strategy consulting firm, obtained my own LEED accreditation, and have since turned my focus to working with property owners to help them improve the energy efficiency and sustainability of their buildings."

The new house achieved a HERS (Home Energy Rating System) Index of 24, which translates into a home that is 76% more energy efficient than a comparable code-compliant home.

The home's additional sustainable features include:

- ◆ **Whole home ventilation** designed to continuously deliver fresh air to the living area and bedrooms and vent an equivalent volume of stale air from bathrooms, laundry and kitchen. "This is one of the most important features of a very tightly constructed home because without balanced mechanical ventilation, any toxins that are present in the home can build up in the air that the occupants breathe," Erle says. The home's building envelope is so tight, in fact, that it has a very low infiltration rate – only two air changes per hour (ACH). By contrast, a standard code-compliant home needs to meet a standard of seven ACH, and an ENERGY STAR home needs to meet a standard of five ACH. Since air does not leak in through cracks in the building envelope, the home uses balanced mechanical ventilation to meet its fresh air needs.
- ◆ **Energy efficient appliances**, including the most energy efficient ENERGY STAR qualified ceiling fans made, are installed in every bedroom and in the living areas. "Because occupants perceive moving air as cooler than still air, having energy efficient ceiling fans permits HVAC set points at higher temperatures in the summer. Higher temperature set points translate to reduced energy usage, and lower environmental impact," Erle says.

Pool sanitized by chemical-free UV Ozone and kept warm using an automatic cover



- ◆ **Energy efficient LED lighting** – achieved through a combination of native LED fixtures and LED lamping.
- ◆ **Strategies designed to minimize the home's impact on the surrounding environment.** Erle's is a coastal home, adjacent to wetlands and a body of water that acts as a habitat for oysters, eel grass and many other marine species. The property incorporates a naturally vegetated buffer between the home and the bayfront wetlands that will reduce the effects of storm water runoff from the landscaped areas of the site.
- ◆ **Strategies designed to enable the house to remain code-compliant even when building codes are revised.** The International Residential Code (IRC) is a comprehensive building code that governs one- and two-family dwellings, and the version of the IRC that was adopted in 2009 calls for homes to include fire sprinkler systems. The IRC provides building code guidelines and state municipal authorities have the option of adopting the code in whole or in part. New York State adopted the fire sprinkler recommendations for homes with three or more stories. However, Erle, whose home is only two stories, elected to install a fire sprinkler system for several reasons:
 - » To provide extra time for occupants to exit the building in the event of a house fire and protect first responders who may have to enter a burning building.
 - » To reduce the amount of damage to the home in the event of a house fire.
 - » To protect the environment. The home is adjacent to a delicate marine habitat. The volume of wastewater generated fighting a sprinklered fire may be half of the wastewater resulting from fighting a non-sprinklered fire.
 - » To reduce the home's operating costs by earning insurance premium credits, which may be as high as 13% for sprinklered homes.
- ◆ The home was built **two feet above the code-specified flood elevation** with the intention that, even if flood elevations are increased as a result of rising sea level, Erle's home will remain compliant.
- ◆ Erle incorporated **mildew-resistant coatings, insulation with smart vapor retarders, and mold-resistant gypsum** into the home's high performance framed wall assembly, which was designed to combat the moisture issues that tend to impact coastal homes.
- ◆ **Water-efficient toilets, shower fixtures and faucets** designed to reduce the use of treated municipal water.



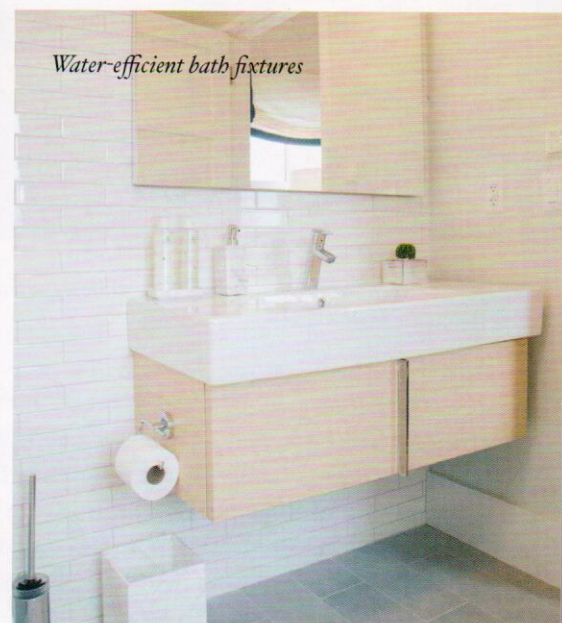
Bedroom with sustainable interior furnishings



Sustainable local wide-plank oak floors throughout



Outdoor fabric on sofa for increased durability



Water-efficient bath fixtures



Sustainable cabinets and ENERGY STAR appliances in the kitchen



Natural fibers featured throughout the bedrooms



(Left) FSC-certified cumaru decking (Right) Energy efficient exterior LED lighting

“As a LEED accredited professional (LEED AP Homes), I am working with a family that is rebuilding following a fire. They are seeking LEED Gold certification for their new home, and I am helping them make sustainable choices while advising their builder on how to ensure that the LEED-compliant design strategies his company implements are documented to capture the LEED credits. I have recently advised an architect who will seek LEED Gold certification for a home he is designing for his family.”

But Erle’s work extends beyond advising homeowners on their sustainable residential new construction projects. She recently joined Deutsche Bank’s Retrofit Partners platform and is now working with owners of existing commercial, institutional and residential buildings to structure energy efficient retrofit projects designed to decrease their properties’ energy usage. “With seven-figure annual utility costs, these clients stand to benefit significantly if we can materially reduce their energy consumption,” Erle says. “And the CO₂ reduction from a large commercial project can be significantly greater than that of a single energy efficient home.”

Erle’s commercial energy efficiency retrofit projects include:

- ◆ Properties with end-of-life equipment issues whose owners have asked how they can not only solve current needs, but also ensure that their buildings are positioned for future changes in consumption patterns.

- ◆ Properties that want to implement energy-saving capital upgrades that are funded through the savings generated.
- ◆ Helping several buildings investigate the potential for oil-to-gas and steam-to-gas fuel conversions. Erle is evaluating combined heat and power (CHP) at one of these sites to provide resiliency during power outages.

“When I work with luxury custom home builders, I emphasize that luxury includes performance. I work with property owners to specify sustainable features in their homes in terms of energy efficiency, water efficiency and indoor air quality. With my commercial clients, I prioritize performance that can be benchmarked, quantified and monitored,” Erle adds. “Being a rational economic actor and a steward of the environment are not mutually exclusive. Property owners don’t have to sacrifice economic performance to do the right thing from an environmental perspective. In fact, I’m working on several large projects right now that are exploring how to mine utility expenses to pay for energy efficient capital upgrades that will make these properties perform better and reduce their carbon footprint.”

“My life is now about sustainability,” Erle says in summation. “I live it and I believe it, and feel great about my ability to make a measurable impact.”