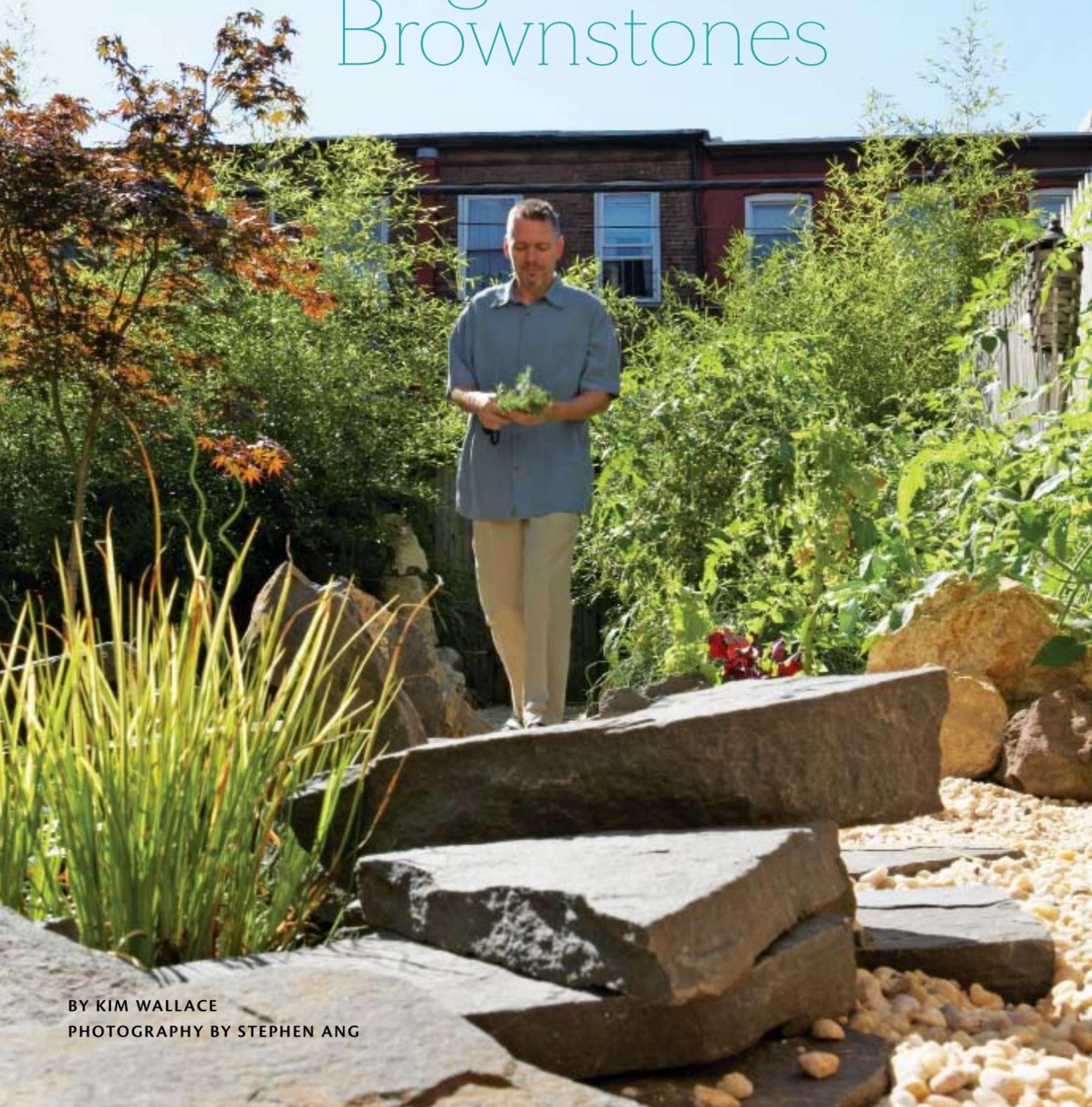


Green

Among the Brownstones

Elegant and thoughtful from the ground up, this rehabbed New York building moves into the future by reclaiming the past.



BY KIM WALLACE
PHOTOGRAPHY BY STEPHEN ANG



A boarded-up, 135-year-old brick brownstone

that had been sitting vacant for years in a Brooklyn neighborhood wasn't an easy place to envision a healthy home. But where others saw blight, architect Jörn Schröder saw opportunity. Using *baubiologie*, a system of design that considers the interaction between buildings and inhabitants, Jörn transformed the dilapidated eyesore into one of Brooklyn's first sustainably remodeled, solar-equipped brownstones. In doing so, he also created a charming home for himself, his partner, Kat Roberston, and for renters looking for a healthy place to live.

A CITY-WIDE SEARCH

Though Jörn had built many homes from the ground up in his 14 years as an architect, he'd never tried an urban renovation. Interested in revamping an existing structure, he embarked on a two-year hunt for the perfect urban property. He discovered it in a rundown Brooklyn brownstone—far from perfect by most standards—that he purchased from New York City's Housing and Urban Development (HUD) program in 2003. The building had a checkered past. Built as a single-family home in 1875, the structure was later converted to a multifamily dwelling and eventually abandoned. Kat and Jörn's neighbors say the building served as a haven for drug dealers and squatters before the city took over. Jörn was determined to restore

the building to its historic beauty, and to add something of value to its neighborhood.

After finally locating the ideal building for his project, Jörn had to wait another agonizing six months to receive a building permit before he could begin tearing into the remodel. Meanwhile, the deteriorating black tar roof was letting rain seep in and destroy most of the original wood floors. "The condition of the roof was terrible," Jörn says. "I thought, 'Oh my God, the longer I wait, the worse it's getting and the more it's rotting.'"

The water leaks had caused the home's carrying wall to settle and the floor to sag. Jörn had several problems to remedy—fast. "The No. 1 priority was to replace the roof. It had a 2 1/2-inch-thick layer of tar and black paint," he says.

TOP: The home's exterior retains its architectural history, while green lime casein paint offers a unique, natural appearance.

OPPOSITE: Jörn harvests herbs in his Brooklyn home's lush backyard garden.

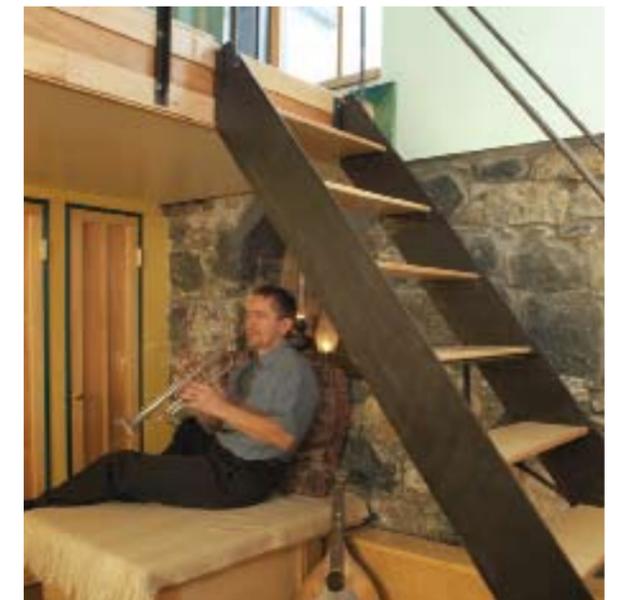


HEALTHY INSIDE

Jörn restored the building's structural integrity by replacing the roof and several rotting beams and structures. Then he turned to the multifamily home's interior, dividing the brownstone into four units: two second-floor studios with a shared bath; a one-bedroom space on the first floor; and a one-bedroom apartment on the lower level, which would become his and Kat's home.

Committed to honoring the historic elements of the building he'd worked so hard to procure, Jörn restored the home's original details and interior design as much as possible, while upgrading it to modern safety and efficiency standards. He salvaged and reused the wood flooring that had survived the water damage and safely removed years of toxic paint from the original marble fireplaces. He painted window frames with water-based paints and stains and used low-odor and lime casein paint on the walls. Jörn replaced the damaged floors with bamboo and natural linoleum and used recycled carpet in the main stairwell that leads to the second floor. The couple put cork flooring in their bedroom and treated all the wood floors with water- and oil-based finishes.

To get up to speed on efficiency, Jörn blew 6 inches of cellulose insulation into the walls, 18 inches into the ceiling and 10 inches into the floor cavities. He replaced the old, inefficient windows with enlarged, low-emissivity, double-pane ones to maximize sunlight.



ABOVE: Jörn plays the trumpet in a music alcove tucked under the stairs.

TOP: Minimalist décor highlights the dining area's reclaimed brick and stained-wood wallboard.

OPPOSITE: Kat and Jörn love the entry's original wood door and arch.



Why Wi-Fi?

Kat Robertson and Jörn Schröder wanted to offer Internet access to their tenants, but they are concerned about electromagnetic field (EMF) exposure. The couple banned Wi-Fi from the building and instead uses Ethernet and Cat-5 computer networking. "Every room in this house has an outlet for a Cat-5 cable, so everyone can hook up the computer and have Internet," Jörn says.

SEEKING SOLAR

Jörn and Kat wanted to invest in solar panels to minimize their home's dependence on fossil fuels. In 2006, three years after purchasing the brownstone, the couple began the search for New York State Energy Research and Development Authority-certified solar panel installers—a prerequisite in New York City. What seemed like a simple task—choosing an installer and moving forward with the plans—turned into a three-year saga filled with lengthy paperwork and inspection processes.

Their persistence ultimately paid off, however. The brownstone relies exclusively on solar power for electricity and saves even more energy through efficient lighting set to motion detectors, ensuring lights are only on when rooms are in use. Just this one relatively easy action had inspiring consequences: After Jörn and Kat installed the motion detectors throughout the home's shared spaces, energy use plummeted from 80 kilowatts per month to an astonishing half a kilowatt per month. The couple realized further savings after installing solar panels, combining all of the building's electric meters, and adding motion detectors within the lower-level apartment. "Con Edison, our electric company, sent an inspector over to make sure there was no wiring manipulation," Jörn says. "He couldn't believe it! In the public spaces, it was .02 percent of what it was before!"

Jörn and Kat installed a climbing wall that extends from the lower level through the living room. Cushions provide mobile seating that can be removed if additional floor space is needed.

Baubiologie Basics

Jörn and Kat renovated their brownstone according to the principles of baubiologie (or "building biology"), a term coined in Germany to describe a design philosophy that treats homes as living organisms. Kat describes baubiologie as a movement that promotes the holistic use of healthy building principles to improve living spaces and the health of the people who occupy them. Baubiologists emphasize highly breathable, nonsynthetic materials; passive solar design; high-mass interior walls; and cross-ventilation and shading to take advantage of a home's climate and environment.

Kat and Jörn's brownstone adheres to baubiologie standards by using the original natural stone and brick; flat, no-shine materials such as lime casein paint; and an open floor plan that takes advantage of passive solar gain. Learn more: buildingbiology.net

CLOCKWISE FROM TOP LEFT: Kat and Jörn wanted to retain the building's original architectural details such as this built-in window ledge with 1800s shutters and a radiator. The building's thick walls allow for built-in nooks such as this filing station and shelf. The flat lime casein paint is nontoxic and adheres to the principles of baubiologie. Jörn restored the home's original marble fireplaces.



A Chat with the Homeowners

With what part of the house are you happiest?

Kat: During warm weather, the backyard is a favorite “room,” where we enjoy meals, barbecues with friends and just savoring the sun.

What are your hobbies?

Jörn: Sailing, photography and playing the trumpet.

Kat: Painting with watercolors and producing and performing multimedia poetry.

Any tips for living in small spaces?

Jörn: Decorate with minimal furniture, allowing for greater living space. Optimal storage design is also important, along with reducing clutter and consumerism.



RESOURCES

Architect:
Jörn Schröder,
Brooklyn, New York
(347) 413-5035
bio-solar.com

Bamboo Flooring Biz
bambooflooring.biz
bamboo floors

Benjamin Moore
benjaminmoore.com
low-VOC paint

Bioshield
bioshieldpaint.com
lime casein paint,
glues, solvent-free paints

Kohler
us.kohler.com
dual-flush toilet

National Fiber
nationalfiber.com
cellulose insulation

SunPower
sunpowercorp.com
SPR-210-WHT
solar panels

Kat says the backyard is her favorite “room,” where she can paint, relax with friends and enjoy a nature oasis in the middle of the city.

The outdoor garden features sculptures made of stacked rocks found on the property. A gravel path invites exploring and allows rainwater to seep into the ground.

AN URBAN SANCTUARY

Within Brooklyn’s bustling concrete jungle, Kat and Jörn have created a sanctuary. The couple and tenants plant fruits and vegetables in the lush backyard. “It’s like another room for us,” Kat says of the outdoor space.

Inside, the earthy tones and natural materials create a comforting atmosphere. “It’s truly an oasis. It feels great to come inside, and we enjoy spending time at home,” Kat says. But the part that makes her happiest is knowing she and Jörn can offer a healthy, eco-friendly home to their tenants. Tenant Ama Codjoe says living in the brownstone improves city life. “In any city, but especially here, it is important to have a safe haven and refuge from the hustle, bustle, grime and crowds,” she says. “There are many benefits to living in New York, but they wouldn’t outweigh the bad if I didn’t have a safe, drama-free, quiet place to come home to every evening. I feel blessed when I enter my refuge,” Ama says.

Hoping to share their home’s benefits with many, Kat and Jörn also sublet their apartment while they travel, often to European travelers on holiday or others in need of short-term New York housing. “The thing that really makes me feel good is that our tenants feel like this is their home, too,” Kat says. “It’s not just an apartment they live in. They love coming in the front door.”

Freelance writer and editor KIM WALLACE uses healthy materials to make her Kansas City apartment a refuge.

