CASE STUDY:

GREENING

A GREENE AND GREENE HOUSE

The first GreenPoint Rated historic home—a Greene and Greene house in Claremont—showcases how to improve a building's environmental performance while protecting its architectural integrity.

"Not only will our historic home be energy efficient but the way in which we've built it has extended the house's life cycle, making it possible for future families to share in its history."

– BLENDA WRIGHT, ***homeowner***

Blenda and Andrew Wright's home, an influential work by early twentieth century architects Greene and Greene, had seen better days. The couple wanted to accommodate a modern lifestyle while protecting and restoring their home's architectural integrity. More than 100 years later, it seems only fitting that the home bear another green label—GreenPoint Rated.

Improving the environmental performance of a historic home proved to be an exciting opportunity for their architecture and construction firm, HartmanBaldwin.

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ENERGY USE

To create an effective air barrier and improve insulation performance, HartmanBaldwin retrofitted the exterior walls and vaulted ceilings with spray foam insulation.

Properly sealing and insulating the home's building envelope helped make it possible to downsize the heating, ventilation and air conditioning (HVAC) system, which has the dual benefit of improving comfort and reducing energy use.

Most of the windows were either not original or rotten beyond repair. These were replaced with new custom double-pane windows to improve comfort and energy efficiency while maintaining the historic look.

PROJECT STATS

LOCATION: **Claremont, CA**

GREENPOINT RATED SCORE: **49**

YEAR BUILT: **1903**

ORIGINAL SIZE: **2,940 square feet**

NEW SIZE: **3,962 square feet (including new garage and studio)**

PROJECT SCOPE:

- **Energy-efficient retrofit *(Green renovation)* while preserving historic home's architectural integrity.**
- **Addition of 3-car garage and study.**
- **Extensive interior renovation and exterior redesign of grounds.**

ORIGINAL ARCHITECT:
Greene and Greene

REMODEL ARCHITECT/BUILDER:
HartmanBaldwin Design/Build

GREENPOINT RATER:
Charisse Dunn, Healing Spaces by Design

ELEMENTS LABEL
Score was capped at 49 due to Whole House label prerequisites

49 POINTS

INDOOR AIR QUALITY

The home has a detached garage, an excellent strategy for keeping car exhaust and other air pollutants out of the house. To further protect indoor air quality, low-VOC paints were used throughout the home's interior. The bathrooms and kitchen have exhaust fans that vent to the outside to remove moisture and odors. The HVAC system has a high efficiency filter to reduce indoor air pollution, and the home has an alarm to alert residents if carbon monoxide in the indoor air exceeds safe levels.

RESOURCE CONSERVATION

The project team took strides to reduce waste wherever possible. The original garage, for example, was relocated in its entirety to another property in Claremont. Its new owners are planning to restore it and use it as a guesthouse. Some of the original plumbing fixtures, as well as a pedestal sink and kitchen sink that were not original, were removed and reused on another project. Construction waste, including cardboard, plastic and aluminum, was recycled.

WATER CONSERVATION

All the faucets and showerheads were replaced with low-flow fixtures, and the toilets were replaced with low-flow reproductions of a 1921 toilet with a low wall-hung tank. Planned improvements to the home's landscaping include creating a garden true to the Arts and Crafts period, with a smaller lawn and an emphasis California native plants and trees that require less irrigation.

COMMUNITY & LIVING GREEN

As is common with many older homes, the Darling-Wright residence presents an inviting face to the community, with a front door and porch oriented toward the street. The entryway also provides residents with a good view of callers approaching the door. The pedestrian-friendly neighborhood is served by public transit, and many neighborhood services and amenities are located within walking distance. The project also received GreenPoint Rated points for accessibility, thanks to a ground-floor bathroom that has blocking for grab bars.

Skylight lets in natural daylight and helps reduce energy use.

Detached garage keeps exhaust and other pollutants out of the home.

All cardboard, metal and concrete construction debris is recycled.