

preservation

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INNOVATION

Drone Ranger



Photo Credit Nelson Richards Trenner

It used to be that if Annabelle Radcliffe-Trenner needed to inspect a building's highest point, she would have to rent an expensive lift, assemble scaffolding, or hire a professional climber.

"I would say, 'Could you move a little over to the right so we can see that?' and the poor climber would say, 'If I do that, I might fall 50 feet,'" says Radcliffe-

Trenner, founding principal of Trenton, New Jersey-based Historic Building Architects, LLC (HBA). "We couldn't always get to where we needed to be."

But early last year, HBA's staff welcomed a new addition that allows them to access all angles of a building, obtain more accurate information than ever before, and save time and money to boot:

Howie, a 3-pound drone, flies around Trinity Church in Princeton, New Jersey, taking aerial and close-up images.

a 3-pound drone they named Howie.

Equipped with four propellers, a digital camera, and a GPS system, Howie can fly to the tallest points of a building to capture close-up images of its condition. The images are sent via radio signals to HBA's team on the ground, which uses them to create detailed restoration plans for each structure.

"We can see every rusted nail or hair-line crack," Radcliffe-Trenner says.

HBA complies with the FAA's strict regulations regarding drones, including height restrictions, bans on commercial use, and requirements to notify authorities before flights. "He's a tool for doing our assessments, just like a digital camera, or pen and paper," says intern preservation architect Graham Caffisch, who introduced the firm to the idea of drones after using one at a previous job. "He goes every which way. He's a very smart device."

So far, the hardest part of the new tool is flying it.

"I've crashed Howie before," Radcliffe-Trenner says with a laugh. "You need to be very calm and methodical to operate him. I get too anxious." —Lauren Walser