

P H I L

Philadelphia Green

Sustainable Design in the Delaware Valley

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Revamping the Row Home

Visionary housing design for the 21st century

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The Flats at Orion is a row home development in the University Heights neighborhood of Philadelphia. The development is a mix of modern and historic architecture, featuring a mix of materials and colors. The Flats at Orion is a row home development in the University Heights neighborhood of Philadelphia. The development is a mix of modern and historic architecture, featuring a mix of materials and colors.

Ask a Philadelphian about the city's residential architecture, and he'll likely conjure images of masonry row homes organized in uniform succession on blocks that look like the neatly stacked soup cans on a neighborhood grocer's shelves. The row home has been the predominant residential architectural typology for centuries, but a new class of architects and developers are taking that quintessential housing style and reimagining it for modern living.

Over the past decade, sustainable architecture and development firm Onion Flats has been raising the bar for architectural innovation in Philadelphia. Rag Flats, which it completed in 2006 in Philadelphia's Fishtown neighborhood, was conceived as an experiment in sustainable urban living, building upon the prototypical Philadelphia dwelling types of the row home, trinity, loft, and pavilion to repurpose an industrial rag factory into a residential garden community. It's a modern twist on the history of Philadelphia's row home neighborhoods, which were often organized as "company housing" around a central mill or factory, creating a community of residents who shared both work and daily life.

The development combines old and new, making use of parts of the original rag factory while incorporating sustainable technologies such as green roofs, radiant heat, solar panels, and permeable parking surfaces. Some sustainable elements, like the rain-water collection system, which uses cisterns located under the parking area to feed irrigation systems, were so innovative that the Philadelphia Water Department had to amend its permitting process to accommodate the new technique. Although the project is quite modern, it still retains the



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Berks Rowset by Onion Flats reimagines the idea that row homes should be next to each other by connecting them at the back. The cisterns two separate facades sit opposite sides of the street.

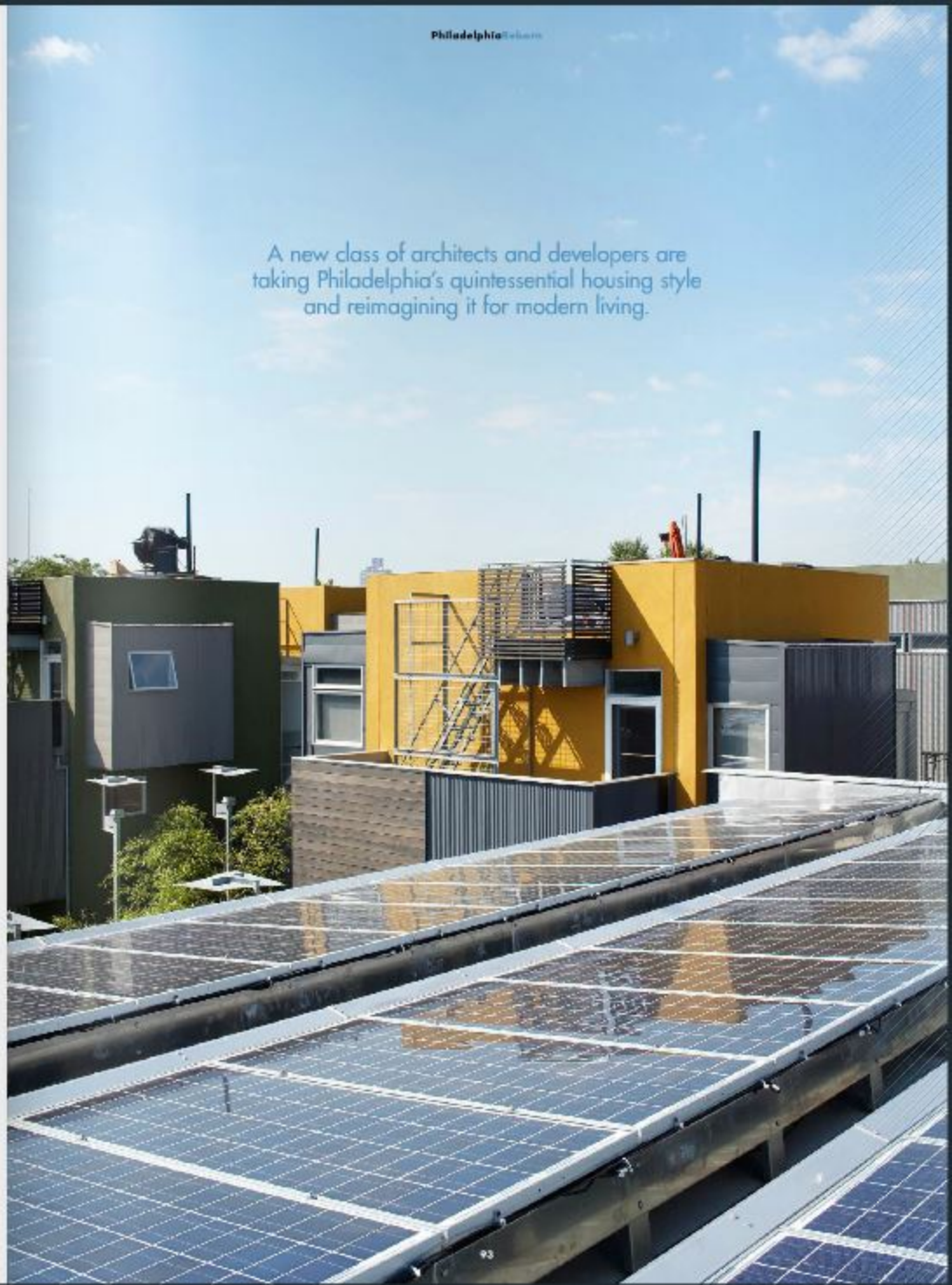
uniquely Philadelphian charm of compact buildings and picturesque paths connecting the community's residents.

Rag Flats was Onion Flats' entrée into the world of sustainable development, and it motivated the team to build more environmentally friendly projects. Next up: the Berks Hewson project, a simple set of infill row homes that are connected front to back—instead of side by side—through the full width of the block. The project was the first in Philadelphia to achieve Gold status through LEED for Homes, and the houses include sustainable features such as intensive green roofs, rain-water-collection tanks, plentiful natural light, and

solar thermal hot water. As a green bonus, each house comes with a Neighborhood Electric Vehicle, a small electric vehicle legally limited to roads with speed limits of 45 mph or less, and reserved electric-vehicle street parking.

Not content with LEED Gold, Onion Flats' next project, Thin Flats, became the first Platinum LEED for Homes multifamily residence in Pennsylvania. It took the concept of the row home and explored vertical rhythm through its unique façade. Thin faces and alternating glazing and cladding make it difficult to discern where one unit ends and the next begins, creating a sense of communal living while still maintaining

A new class of architects and developers are taking Philadelphia's quintessential housing style and reimagining it for modern living.





OFFSHORE PAIDE

The Flats is the first Platinum LEED for Homes multifamily residence in Pennsylvania. The faces and alternating glassing and cladding create a sense of communal living, while the rear facade is activated by jutting balconies.

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The Flats' roof features five pits and elevated planters, providing an amenity to residents and a number of benefits to the building and city.

individual spaces. The result is an interesting exploration into the shared experience of row house life in Philadelphia.

More recently, Onion Flats has been exploring Passive House standards, which specify high insulation values and aggressive air-sealing techniques to reduce heating and cooling loads by 90 percent more than a typical building. The firm's first block of nine passive-house homes, called Stable Flats, is slated for Passive House certification when completed at the end of 2013. Tim McDonald, a partner at Onion Flats, says, "Not only are we hoping to design beautiful places to live, but we're trying to demonstrate to a

larger group of people like politicians and other builders that this makes sense as a way to build."

Onion Flats isn't the only one taking the concept of the row home and adapting it to modern needs. The Envision Group's Icehouse development has created a community of homes on the former site of Dunley's Icehouse in Fishtown. The original building was deconstructed by hand, and bricks and wood beams were used in the construction of the new Icehouse complex, which is a mixture of rehab units and new construction that achieved LEED Gold and LEED Platinum certification, respectively. Similar to the

Rag Flats, the development provides all of the amenities of modern living while creating a community for residents with shared spaces and sustainable features.

When William Penn planned his "Greene Countrie Towne," he may not have been thinking about sustainability, but as the row home is reimagined by sustainable developers throughout the city, Philadelphia moves closer and closer to becoming that green city Penn envisioned.



Reimagining the Rowhome
New Housing Design in a Historic City