

Reviving the Past Through Adaptive Reuse

Abandoned buildings have a deeply negative impact on their surrounding areas, so why aren't more of them restored? Here's what some specialists think.

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By **Anca Gagiuc**

The pandemic has challenged the construction industry to find the middle ground in making a comeback in a green way. This means combining fiscal growth with energy efficiency and reduced emissions. One of the go-to solutions to this green economic recovery is adaptive reuse—the process of [retrofitting an existing building](#) with advanced environmental technologies, while preserving its historic value.

Although it is not a new solution, the advantages of adaptive reuse are more apparent today than ever before. Reusing and retrofitting—rather than building from the ground up—has a significant impact in reducing embodied carbon emissions, while accommodating a growing population.

ONE MAN'S TRASH IS ANOTHER MAN'S TREASURE?



Emily Bouton, Development Coordinator, Beacon

Communities. *Image courtesy of Beacon Communities*

Abandoned buildings have a deeply negative impact on their surrounding areas, with the value of nearby properties affected and crime stats going up in these parts of the cities. So, why aren't more of these properties restored?

"Renovating these projects can be very expensive and complicated, it takes experience and know-how to do so," Emily Bouton, development coordinator at Beacon Communities, told *Multi-Housing News*. Historic buildings need to be restored to certain design standards, which is something not all developers are able to do due to their lack of experience in historic preservation.

"The fact that (some buildings) are abandoned reflects a soft market, and the public investments necessary to make development in soft markets feasible often bring additional costs and complexities," Bouton added.

Retrofitting might be a viable solution, but it is not always possible or easy and that's because of historic or zoning and permitting restrictions. Yet, often there are ways around that, according to Bouton.



Wilber School Apartments. *Image courtesy of Bruce T. Martin Photography via Beacon Communities*

For Wilber School Apartments, now a 75-unit, partially affordable community in Sharon, Mass., Beacon received historic tax credits, so they needed to preserve the 1922-built former school's integrity. The company had to perform building improvements while complying with specific design requirements.

"But even while working within those parameters, we were able to add an addition to the back of the building that allowed for additional apartment units, making the project more financially feasible. The addition was designed to complement rather than replicate the original structure, and it turned out beautifully," Bouton mentioned.

At the same time, Maren Reepmeyer, associate principal & director of adaptive design at CBT Architects, highlights the importance of the collaboration between the property owner and the development team on the vision and intended use of the building.



Maren Reepmeyer, Associate Principal & Director

of Adaptive Design, CBT Architects. *Image courtesy of CBT Architects*

“Finding the right balance between preserving key elements and creating a new identity is a process that we undertake in partnership with our clients, taking crucial physical, financial and cultural considerations into account.”

Most of CBT’s adaptive reuse projects have unique original uses and have been reimaged to serve a completely different purpose within their surrounding urban fabric: A USPS processing warehouse turned into a robotics headquarters, a former candy factory is now a multitenant hub for TAMI companies, and a century-old convention center now houses a finance giant.

However, not all buildings require a total conversion of change of use, Reepmeyer admits.

“A conversion between two opposite typologies would be the most dramatic, expensive and complicated to achieve. However, incremental conversions, properties that previously housed comparable uses—such as R&D to office or hotel to residential—lend themselves to much more reasonable cost, conversion and design scenarios,” Reepmeyer added.

COST-EFFECTIVENESS

One of the main challenges of [retrofitting an existing building into a multifamily property](#) is the financial aspect. “We see a lot of adaptive reuse of old mills or other industrial buildings, particularly in New England, and those often come with high remediation costs to clean up contamination in the building or in the underlying soils,” Bouton said.

Although adaptive reuse projects can be expensive, they are not always more expensive than a ground-up development, according to Bouton. “Cost can depend so much on the state of the building and site.”



Montgomery Mill in Connecticut. Originally built in 1871 and expanded in the early 1900s, the Montgomery Mills manufacturing facility has been transformed into modern apartment homes that maintain the distinct character of the building’s storied past. *Image courtesy of Andy Ryan via Beacon Communities*

Location is the number one factor developers take into consideration when taking on a new project. As such, [transit-oriented developments](#) are the most attractive for multifamily conversions.

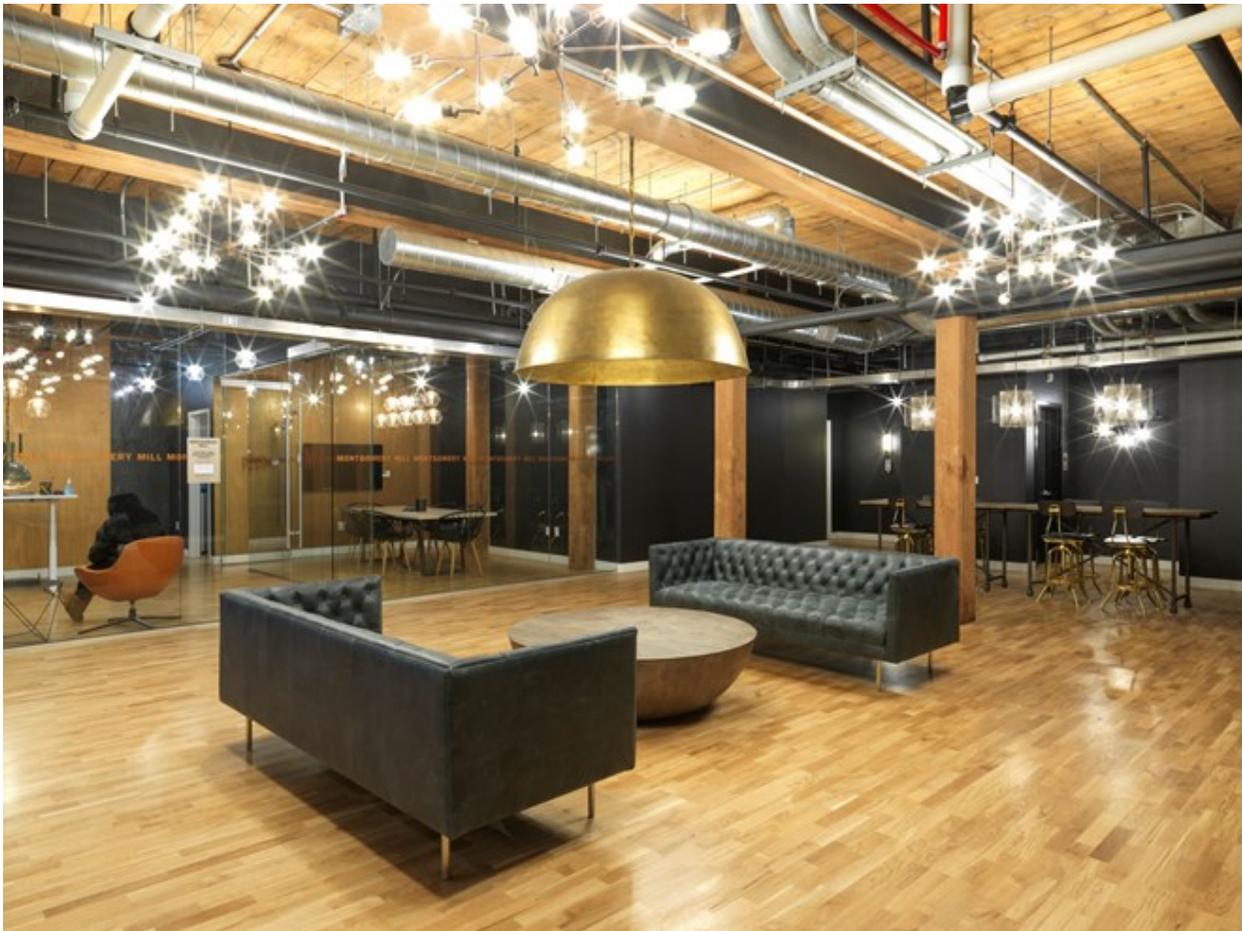
“Renters want to be close to public transportation, and many public agencies who often support these redevelopments with public funds also like to see TODs. Many states’ official public policy prioritizes funding developments that can be classified as TODs,” Bouton said.

ADAPTIVE REUSE + SUSTAINABILITY = ?

Adaptive reuse itself is very sustainable, according to Bouton. However, meeting lofty sustainability standards like Passive House or LEED can be tough when operating in an existing shell and under historic parameters. While it is not impossible, layering sustainability standards on top of adaptive reuse developments adds time, requires design considerations and increases costs.

One reason why applying sustainability standards in adaptive reuse projects can be challenging is the fact that exterior walls of older masonry structures are already thick.

“Since additional thickness will be required to achieve needed performance, often you will lose too much floor space,” said Joshua Zinder, managing partner at Joshua Zinder Architecture + Design & 2021 president of AIA New Jersey. “Each project is unique and there are often readily available solutions, such as closed-cell and open-cell foam insulation, or combinations with batt,” he added.



Montgomery Mill in Connecticut. *Image courtesy of Andy Ryan via Beacon Communities*

Passive House standards can be applied to existing buildings via intelligent retrofit measures, according Nelya Sachakova, certified Passive House designer at RKTB Architects.

“The same concepts apply as for newly built Passive House projects: high levels of insulation, thermal bridge free construction, air-tight envelopes, high-performance windows and mechanical ventilation with heat recovery,” Sachakova said. Although with an existing building a more surgical approach is often required to implement these concepts, the result transforms the efficiency, experience and marketability of the space.

Nate Thomas, project manager with The Architectural Team, noticed that [Passive House has been gaining traction](#) in the adaptive-reuse sector over the past several years. “Just as with new construction projects, the reality of increasingly stringent energy codes and climate change means that more and more adaptive reuse developments will need to incorporate elements of the Passive House approach. Eventually, it will become the norm,” Thomas believes.

One important factor that determines if an adaptive reuse project can be built under Passive House standards is how well the structure was originally designed and built for its location and climate, according to Victor Body-Lawson, founder & principal of Body Lawson Associates Architects & Planners.

“A successful Passive House project of any kind requires careful study and analysis prior to the design phase, something that may be even more critical for a reuse project,” Body-Lawson said.

Elisabeth Post-Marner, principal at Spacesmith, shared some good news for developers who are considering taking on adaptive reuse projects: “The Passive House Institute of the U.S. has modified its requirements for adapting old structures and the updated requirements are not as stringent as new construction, which now provides a greater incentive to go this route.”

PANDEMIC-INDUCED TRENDS

While the pandemic has deeply impacted the leisure and hospitality sectors, and the hotel-to-multifamily conversion is an investment strategy increasingly more popular,

Bouton is more intrigued in seeing what happens with office buildings in both urban and suburban regions, since working from home is more and more common.

“I think, ultimately, the hospitality sector will recover, but the lifestyle changes of working from home may be permanent for many people. There is definitely a potential to convert underutilized office buildings into housing,” Bouton believes.

Reepmeyer also expects to see more conversion projects going forward. “What we see is a longstanding trend for budget hotel offerings in great locations to be transformed into low- and mid-rise student and workforce housing. Similarly, we will see a trend for [senior living conversions](#). These typologies have been missing in urban settings in recent history, as they’ve been pushed away from core urban centers.”

In addition, she noted that the current shifts toward flexibility create prospects for unique mixed-use offerings, such as partial conversions and “super-hybrid” developments.