

# What Coastal Communities Can Do to Adapt to Changing Land Use Paradigms

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**Coastal communities face a number of unique** environmental challenges such as sea level rise, hurricanes, and saltwater intrusion. Changes to the natural environment do not occur in a vacuum though. Cities and towns must also be cognizant of long-term economic trends, which may affect a community's ability to adapt over time. Two major trends facing all American cities right now is the collapsing market for office and retail space. In the first three months of

2023, office vacancy in the United States topped 20 percent for the first time in decades.<sup>1</sup> Large retail properties, such as shopping malls, are also quickly becoming a thing of the past, as it was forecasted in 2020 that 25% of the country's 1,000 malls would close in the next 3-5 years.<sup>2</sup> In such a rapidly changing land use environment, the importance of finding new uses for existing urban landscapes becomes paramount if cities are to make strides in resilience.

### Adaptive Reuse: Its Origins and Future Challenges

Adaptive reuse can be defined simply as reusing an existing building for a different purpose.<sup>3</sup> The first such instance of adaptive reuse in the modern era may be traced back to San Francisco in the early 1960's when developer William Maston Roth purchased the old Ghirardelli Chocolate Factory and converted the property into a high-end shopping complex.<sup>4</sup> Since that time, adaptive reuse has become an accepted practice for private developers. Data gathered by Yardi Matrix found that 14 buildings were converted into apartments over the full length of the 1950's, but over the course of the 2010's that number was 778.<sup>5</sup> Adaptive reuse, however, remains a small component of private development, which means that communities should consider additional incentives to bolster building reuse practices.

One tool that cities can use is an adaptive reuse ordinance. In 1999, the city of Los Angeles enacted an adaptive reuse ordinance in the downtown, which resulted in 60 downtown buildings being converted, resulting in the creation of more than 14,000 housing units.<sup>6</sup> Much of the value accruing from adaptive reuse has been centered around pre-WWII buildings, but as building prices increase with new conversions opening that means the costs for adaptive reuse get pushed beyond what most redevelopment budgets allow. Also, since many of the buildings targeted for adaptive reuse are historic, a city must be mindful of the Secretary of the Interior's Standards for Rehabilitation Guidelines and other federal regulations governing the use of historic properties.

The issue of preservation versus adaptation is one that sparks considerable debate when discussing adaptive reuse. This issue has only been amplified over time, as many early urban renewal projects of the postwar period could be deemed historic by federal standards. Does a decommissioned freeway from the 50's have the same historic merit as an old factory building?<sup>7</sup> Cities will generally fall on one end or the other of this ongoing debate and some value judgements about what buildings are worthy of preservation and what aren't are unavoidable. Other historic preservation models are available that may provide some level of flexibility to the discussion. In England, historic buildings are given three grades.<sup>8</sup> The buildings of greatest historic interest are Grade I. The remaining two tiers are Grade II\*, which are considered

highly important buildings warranting special consideration and the next level, Grade II, are structures considered worthy of preservation, but don't attain the level of historic value found in the other two grades. This approach has value as it recognizes that historic value is not uniform and that different levels of intervention may be necessary from structure to structure. For example, a structure in an area of high economic affluence will be better able to meet the highest preservation standards than a historic structure in a place where building valuations are low and financing options are scarce.

### Evolving Space Needs

To understand the role adaptive reuse can play in cities, one must examine the ways in which space needs have evolved. For example, office spaces have been subject to profound changes in the wake of the pandemic as companies move to a hybrid work model.<sup>9</sup> Even in major financial centers, such as London's Canary Wharf, vacancy rates are climbing. Recently the company HSBC announced it would be moving its corporate headquarters from 8 Canada Square tower in Canary Wharf to another space in London roughly half the size. This relocation means that 8 Canada Square becomes the fourth building in the Canary Wharf District to be fully vacated. In an attempt to head off this issue, many large cities have changed their zoning codes to allow for more adaptive reuse with regards to office buildings. In New York City, local leaders are exploring changing zoning in Midtown Manhattan to allow more offices to be converted into apartments.

As the economic model underpinning the retail and office sectors has changed, so too has the market for adaptive reuse. In the 60's and 70's, adaptive reuse was in its infancy. For example, artists flocked to New York City's SoHo neighborhood during this time.<sup>10</sup> The old factory spaces, with their 18-foot ceilings and arched windows were ideal spaces for artists looking for cheap living spaces. Today SoHo is one of the city's most famous neighborhoods, renowned for having one of the largest collections of cast-iron facades anywhere in the world. Indeed, SoHo is just one noteworthy example of countless urban warehouse districts that have become outstanding neighborhoods in their own right.

Though such warehouse conversions continue across America, the new frontiers for adaptive reuse now center around buildings that are not as easily malleable. Consider





the all glass office skyscrapers of the 1960's, such as New York's Seagram Building and what type of changes would be needed to convert it to residential use. A glass skin on a building can act as a kind of greenhouse, which necessitates the addition of an extra façade to add areas of solid mass. Transforming a space to conform to a completely different land use may also entail changes in the building code. For example, there are differences between a residential building code and a hotel building code, which may entail additional work and labor on the part of the developer.

To address this, planners must carefully review their existing land use ordinances, as zoning code modifications can greatly transform the economic viability of vacant properties. In Fayetteville, Arkansas planners were noticing that many of the development requests they received often centered on the same set of properties.<sup>11</sup> These properties all shared one, major shortcoming: none of them had space to meet local parking requirements. Recognizing this as an impediment to redevelopment, planning staff approached city council to

eliminate parking requirements citywide for commercial properties. This change in parking requirements resulted in a number of vacant properties being converted to new uses. A formerly abandoned gas station was converted to retail space and a vacant building, which had stood empty for almost 40 years, has become a new restaurant. In both instances nondescript, vacant properties were brought to life through a change in building requirements.

### **Merging Building Rehabilitation & Coastal Mitigation**

In the context of coastal communities, a building rehabilitation project that fails to take heed of future flood concerns and other environmental factors is not simply counter-productive, it is a wasted effort. To rectify this, many coastal communities have taken it upon themselves to not only assess buildings for their potential for adaptive reuse, but also to determine what design changes a building must achieve in order to be eligible for flood insurance.

In Apalachicola, Florida local leaders undertook a nonstructural flood mitigation assessment with assistance

from the Northern Gulf of Mexico Sentinel Site Cooperative and the Mississippi-Alabama Sea Grant Consortium.<sup>12</sup> The assessment looked at 10 sample buildings selected by the city in order to identify the appropriate flood hazard mitigation techniques for each structure. Some of the basic mitigation measures looked at include: building relocation, elevation, dry flood proofing, and wet flood proofing. The city also worked with design professionals from Florida A&M University to create four FEMA-compliant elevation options for the city's commercial historic district. A two-story vernacular mixed-use building, for example, could meet FEMA elevation requirements by elevating the commercial ground floor and utilities above the floodplain while also maintaining a separate, private entrance for second-floor residences.

For larger communities, a set of flood resilience design guidelines or a future flood risk zoning overlay are options worth pursuing as they effectively merge the policy frameworks for land use and hazard mitigation. Enacted into the city's Zoning Code in October 2021, the city of Boston's Coastal Flood Resilience Overlay District covers all areas of the city that are forecasted to be flooded with a 1% chance storm event in 2070, coupled with 40 inches of sea level rise.<sup>13</sup> Design guidelines for the district take into account the existing character of the urban fabric and the city identified six most prevalent building types within the overlay area.<sup>14</sup> Using the base building types, the document offered some simple design strategies on how to reconfigure a structure so it could meet design flood requirements. A basic residential design in Boston, such as a triple decker, could be floodproofed by taking the basement unit, moving it to a newly constructed upper floor and then converting the old unit to passive storage. If there are high ceilings on the first floor, another option would be to elevate a portion of the first floor above the design flood elevation. The resulting space below the elevated interior floor could be wet floodproofed with flood vents so water can exit and enter the space.

## Conclusion

Changing demands for office and retail space means the challenge of vacant properties will become more acute in the years to come. To address this, cities can turn to adaptive reuse as a way to find new purposes for vacant properties. Adaptive reuse though is not a one size fits all solution.

Not every structure is as readily amenable to retrofits and those that are may be constrained by existing regulatory or financial arrangements. In coastal communities, environmental hazards, such as high winds and flooding, can place additional constraints on a structure's potential for reuse. However, by carefully examining the city's building inventory and land use ordinances, planners can better tailor their city's regulations to make the most out of the existing structural inventory. 🦋

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## Endnotes

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