

Waste management & recycling

Raze or recycle: the challenge of 'recycling' buildings

Heritage is not just about saving the historic — gasworks, silos, even public toilets, can be 'repurposed' into homes



Europe's largest listed building, Park Hill estate in Sheffield, England, is being transformed into new apartments (right)

Paul Miles SEPTEMBER 25 2015

Converting abandoned infrastructure into other uses is not new. In the 1950s and 1960s, disused warehouses and factories in Jackson Square and Ghirardelli Square, San Francisco were being sympathetically “repurposed” (to use current jargon) rather than razed to the ground.

Today, it is no longer just characterful 19th-century industrial buildings that are being repurposed; architects are transforming 1960s and 1970s silos, office blocks, factories and even public toilets into desirable homes.

Who would have thought that concrete silos once used to store soya beans could be transformed into swanky apartments? In Copenhagen in 2005, Dutch architect Winy Maas, director and co-founder of MVRDV, had the vision to “hang” glass apartments on to the exterior of two disused 1960s silos rather than fill up the vast interiors. “The silos’ interior space and emptiness was part of their industrial character we wanted to preserve,” says Maas of his harbourside project, Frosilo. “Heritage is not just about historic buildings but ones from more recent decades too.” For those who think 1960s buildings are ugly, Maas suggests that “the juxtaposition of difference creates beauty. Strangeness and difference are also part of the language of beauty.” Hence, modern glass and steel juxtaposed with 1960s concrete.

It's not only the aesthetic challenge that draws Maas to such projects. "For many ecological reasons — land and energy use, available infrastructure — it is better to have more intense environments than to continue the sprawl of suburbia," he says. "If you want to intensify existing cities you have to deal with the existing built [environment]."

One big urban repurposing project on MVRDV's drawing board is the conversion of a former US army base in Mannheim, Germany, which Maas describes as "a ghost town". On a 500-hectare site, rows of identical four-storey blocks once housed more than 10,000 Americans. Turning these abandoned apartments into desirable homes will be a challenge. "We're looking at a catalogue of interpretations to introduce difference and character," says Maas. Construction is due to start within the year.



The Rotunda, a former office block in Birmingham, has been turned into flats

In the UK, developer Urban Splash has converted a 1960s office block in Birmingham, the Rotunda, into an upmarket residential tower. Although Urban Splash is best known for spacious loft apartments in 19th-century warehouses in Manchester, chairman Tom Bloxham is another champion of the potential for architecture from recent decades. "When I was growing up, people were demolishing

Victorian villas because they were draughty," he says. "We'd never dream of doing that these days yet there are 1960s buildings that are being demolished. With some loving care and attention these could be brought back to life. The problem is usually lack of maintenance."

Urban Splash has commissioned various British architects to give dramatic makeovers to dilapidated 1960s tower blocks in Leeds and Sheffield. Although not "repurposing" as such (as the end-use is still residential) it shows what can be done with a concrete jungle once deemed worthy of demolition. In Sheffield, a modernist sprawl with nearly 1,000 flats — [Park Hill](#) — is Europe's largest listed building. It is undergoing a gradual makeover. Three hundred flats will have been completed by the end of this year. "It's more environmentally sound to recycle these structures than to knock them down and start again," says Bloxham. "It saves a lot of rubble going to landfill." He cites the former 1960s Birmingham Central Library as an example of architecture that could have been repurposed rather than demolished and the much-maligned Robin Hood Gardens estate in east London as one that deserves to be saved.

These monumental recycling projects come in different sizes. In Keswick, in the Lake District National Park, a housing association has recently completed the conversion of a two-storey 1960s toilet block, disused for five years, into four small one-person flats.



CGI of the Domino sugar refinery in Brooklyn

The Keswick Community Housing Trust bought the block, valued at £120,000, from the local council for a nominal £1. Unlike, say Frosilo, where architects have made a feature of the structure's previous life, any signs of the block's history will be wiped clean. "We're not leaving any souvenirs, not the gents and ladies signs or anything. We don't want residents to be teased, saying that they live at Poo Corner or anything

like that," says trust chairman, Bill Bewley.

"It's a tricky little project — we need new stairs and have to move windows but it's all worth it as there's a real shortage of homes in the Lake District and most jobs are low-paid," says Bewley.

There were 17 applications to rent the four flats. An official opening will be held on September 29.



Sketch of the Brick, Sweden

It is to meet the demand for low-priced housing for young and first-time buyers that Curt Ahnstrom, chief executive of Scanprop Development, commissioned Swedish architects White Arkitekter to transform an enormous disused 1970s brick building in Stockholm. The plan is to repurpose the former Ericsson headquarters, also known as the Brick, into 1,100 apartments. This being Sweden, there will also be 4,000 bicycle spaces.

The first phase is scheduled for completion in 2018. Architect David Alton acknowledges the challenge of taking the Brick, "a huge, dominant

building" and turning it — and the surrounding area next to a motorway — into a desirable and liveable environment. "Housing in itself does not make up a proper cityscape," he says. "To create a desirable place to live, work and love there needs to be other functions — businesses, shops, cafés, restaurants, high-quality parks and squares, pedestrian areas. The challenge is to take this harsh industrial building, part of our modern industrial heritage, and transform it." The transformation will include living roofs planted with sedums and an undulating 200m roof-top running track.

The American developer Two Trees is taking a similar approach in Brooklyn, New York, commissioning SHoP architects to convert the abandoned 19th-century Domino sugar refinery into housing, commercial space and public areas. Before any homes are even begun, community arts projects are taking place in and around the buildings. “New Yorkers prefer to live and work in vibrant, creative, mixed-use neighbourhoods, and they will pay a premium to do so,” says David Lombino, of Two Trees. “Cultivating arts and culture can help create those desirable conditions.”



King's Cross 'repurposed' gasholders

In London, the same is happening in King's Cross, with a variety of high-profile events — most recently an open-air natural swimming pool — creating a desirable neighbourhood before the area's regeneration is even complete. A noticeable repurposing project in the area is the canal-side gasholders. A triplet of gasholders, grade II-listed, is being repurposed into 144 residential units. The 19th-century steel work is being restored and re-erected. The three residential structures, each with a rooftop garden, will be at different heights inside their circular frames, “to reference back to what it was like when the gasholders rose and fell depending

how full of gas they were”, says Chris Wilkinson of Wilkinson Eyre, the architects responsible for the gasholders project (as well as the major repurposing of London's 1930s Battersea Power Station). The juxtaposition of the three structures inside the historic holders will enhance London's character, says Wilkinson. “London has a good mix of old and new, it lends vitality,” he adds.

So what of the future? What structures are we building today that will become redundant and ripe for repurposing? Some suggest that in cities of the future, car parks won't be necessary as places become car-free. In the US, Savannah College of Art and Design students have designed “SCADpad” homes that fit on to a single parking space in a multistorey car park in Atlanta. At just 12.5 sq metres, they are tiny but it's a big idea for how we might rise to the challenge of growing urban populations.

Re-using architecture



Cars race on the Fiat factory roof, Turin C1915-1921

The huge walls shelter pizza restaurants and cafés, tobacconists, souvenir shops, even a few apartments. This was the third century palace of Diocletian in Split, the retirement home of the Roman emperor. After the Romans fled, it was appropriated by the remaining citizens and became a walled city — one in which the walls were inhabited.

The reuse of architecture has a long history. And why not? The most sustainable thing in the world is to reuse the best and biggest buildings of the past when their original use expires. [Tate Modern](#) in London (a former power station), MoMA PS1 in New York (a public school) or the new Fondazione Prada in Milan (a brandy distillery) have enshrined the behemoths of the industrial city as the natural habitat for contemporary art.

It's not just art. Hamburg's vast, late and expensive new concert hall the Elbphilharmonie is emerging from a 1960s brick warehouse, while Turin's former Lingotto Fiat factory has been transformed into a cocktail of shopping mall, cultural centre, office complex and high-end eating destination.



Wunderland Kalkar, near Düsseldorf

If these reappropriations have become familiar, other examples underline the potential of an intelligent repurposing of all imaginable architectures. The Torre de David was a bank's office building in Caracas that was abandoned halfway through construction due to Venezuela's banking crisis. It was turned into the world's tallest squat, transformed by poor citizens into a remarkable vertical city. Residents were evicted last year and the experiment ended but it illustrated the possibilities of bottom-up reuse. Perhaps the most remarkable instance is Wunderland Kalkar, a German amusement park built out of a nuclear power station. It is surely one of the weirdest places to play.

The current passion for reuse might be explained by sustainability or fashion but, most importantly, it affords a sense of history and texture, taking advantage of buildings already embedded in cities. They are buildings with atmosphere, history and stories inscribed in their fabric. And sometimes sustainability isn't just about the energy and materials saved but about the stories, craft and intelligence embodied in its walls.

Photographs: Urban Splash; White View; DeAgostini/Getty; Victoria Bonn-Meuser