

GOING, GOING, GONE

By Teo Kai Xiang

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Skyscrapers
in peril

GOING, GOING, GONE

The inexorable march of progress in Singapore has seen relatively new buildings torn down for redevelopment, a trend that has sparked a debate on conservation



Teo Kai Xiang

While many wonders of the ancient world have stood the test of time, modern skyscrapers often face a different, shorter-lived fate.

Singapore stands at the forefront of this phenomenon, being home to 10 of the world's tallest skyscrapers that have ever been demolished as at 2024, according to the US-based non-profit Council on Tall Buildings and Urban Habitat.

These buildings that were torn down, then rebuilt, were no older than 45 years of age. This places Singapore second only to New York City, which leads with 25 such skyscrapers consigned to the scrap heap.

In third place is Tokyo with eight tall buildings demolished. The 2024 ranking lists the 100 tallest buildings demolished in the world.

Experts speaking to The Sunday Times say the trend of sky-high demolitions is linked to Singapore's limited land availability and the shifting needs of the Republic's citizens – but caution that there is a cost to the environment and impact on the island's urban identity.

Mr Mok Wei Wei, managing director at W Architects, says: "In a fast-growing economy, you want to have new building stock to cater to new users, so you don't think twice; you just redevelop."

"This has always been the kind of attitude to buildings that are not classified as historic or of heritage value."

The veteran architect adds that debates around conservation and the brisk pace of development have dogged decision-makers for decades.

Such discussions intensified in the 1980s, when the fate of the city's shophouses and historic settlements was called into question.

Eventually, a consensus was reached regarding the historical value of certain structures like shophouses, says Mr Mok.

This meant the unveiling of the Conservation Master Plan in 1986, and the creation of conservation areas in historic places such as Kampong Glam and Emerald Hill in 1989.

"But when it comes to the more modern and nondescript buildings, we don't think twice about tearing them down," he adds.

"In the 1990s and 2000s, there was a great revision of the plot ratio of the city in Singapore. Condominiums that were less than 20 years old were taken down. It was very common in Singapore because there was great money to be made in pulling down these buildings and rebuilding them."

FINANCIAL
LOGIC BEHIND
DEMOLITION

Dr Joseph Ooi, professor of real estate at the National University of Singapore (NUS),

says a continuous cycle of demolition and redevelopment is part of the life cycle of any city that seeks to meet the shifting needs of its residents.

In the context of Singapore, the pace of these demolitions comes down to these buildings' obsolescence in the face of rapidly changing needs.

"In that context, as Singapore develops over time, the plot ratio of certain areas has increased," he adds. "We can now go higher and higher because technology allows us to do so."

Plot ratio is the total floor area of a building compared with the size of the land it is on, and in the context of construction, intensification means raising this ratio. Doing so creates the opportunity for increased profits for developers.

Developers of the demolished skyscrapers cite their redeveloped buildings' increased square footage, improved sustainability features and the market's desire for more mixed-use developments as key reasons buildings have been demolished instead of being adapted.

Take Fuji Xerox Towers in Anson Road, for example. Its demolition by City Developments Limited (CDL) in 2023 made way for the currently under-construction Newport Plaza – and meant a 25 per cent increase in floor area to about 655,000 sq ft.

"With this redevelopment, we are converting an office building which is over 30 years old, and in a prime Central Business District (CBD) location, into a modern mixed-use development. Fuji Xerox Towers had a relatively less efficient floor plate configuration as well as lower floor-to-ceiling height," says a CDL spokesman.

Meanwhile, AXA Tower – built in 1986 for the Ministry of Finance as the former Treasury Building – has long been a feature of the CBD with its cylindrical stack-of-coins structure, up till its demolition in 2023.

The new 305m edifice replacing it is set to become the tallest building in Singapore, following its completion in 2028, and represents an over 50 per cent increase in total floor space. The new mixed-use development includes offices and luxury condominium Skywaters Residences.

LOST URBAN
IDENTITY?

Many of these demolished skyscrapers, however, have played a significant role in Singapore's urban history.

The frenetic pace of overhauling them tells the story of how urban development has marched on here without looking back.

Concentre in Orchard Road, built in 1979 and currently being demolished, was designed by architectural great Alfred Wong and

served as the headquarters for local telecommunications giant Singtel for 45 years. In the year of its construction, it was described in a Straits Times report as a "beacon to the future".

The former CPF Building, which once housed the headquarters of the Central Provident Fund Board, was demolished in 2017 to make way for the current CapitaSky building in Robinson Road.

A spokesman for developer CapitaLand says an extensive review concluded that while the building was originally designed to meet specific national requirements of the 1970s, it no longer met Grade A office standards in aspects such as floor-to-ceiling height or sustainable mechanical and electrical practices.

The new structure saw a nearly 25 per cent increase in total gross area to over 600,500 sq ft.

Likewise, the UIC Building in Shenton Way – which once held the title of Singapore's tallest building for a year in 1973 – was demolished in 2013 to make way for a new building with 60 per cent more floor space, incorporating a new office block and new condominium V on Shenton.

Mr Heng Chin Hong, head of strategy and planning of developer Singapore Land Group, says the new mixed-use development, completed in 2017, allowed the company to "play our part to rejuvenate the traditional business district of Shenton Way and promote the concept of city-living, an emerging idea at that time".

There is a regulatory dimension to these developments, notes Dr Lee Kwan Ok, associate professor and deputy head of the NUS department of real estate.

She points out that many of these sky-high demolitions took place in Singapore's CBD and were spurred on by the Urban Redevelopment Authority's (URA) CBD incentive scheme.

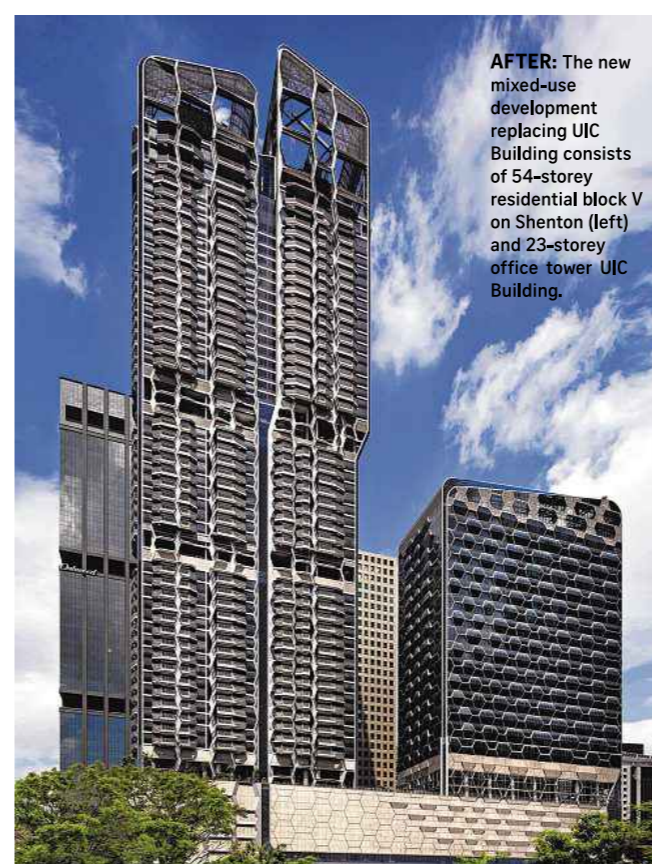
The scheme was introduced in 2019 to support the rejuvenation and transformation of the CBD into a more mixed-use and vibrant precinct – with more housing options and a wider range of amenities and recreational offerings – by offering developers increased plot ratios as an incentive.

"Singapore, with its dynamic changes in the CBD landscape, is efficient because of redevelopment that provides more space to meet increased demand," she says. "But it means that a lot of quite iconic buildings – like the CPF and UIC buildings – they're just gone."

Dr Lee applauds the initiative's promotion of more mixed-use developments within the CBD, but takes issue with part of the scheme's eligibility criteria, which states that the building need only be over 20 years old.

"When you think of high-rises made with good materials, they can last 100 years," she says.

Beyond raising the minimum age of buildings to be redeveloped under the scheme, Dr Lee also recommends further incentivising the adaptive reuse of older buildings and adopting more formal heritage impact assessments – a practice common in places like Hong Kong



AFTER: The new mixed-use development replacing UIC Building consists of 54-storey residential block V on Shenton (left) and 23-storey office tower UIC Building.

but neither mandatory nor widely conducted in Singapore.

She cites Golden Mile Complex, which was the first building of its kind to be gazetted for conservation by the URA in 2021, as most other conserved buildings are from the island's colonial era, from before the 1960s.

In 2023, Golden Mile's new owners – Far East Organization, Perennial Holdings and Sino Land – hired a consultancy firm and reached out to experts to understand how best to preserve and restore iconic elements like the building's terraced facade.

"On the one hand, you have places like South Korea and Taiwan, where it's all freehold and it's very hard to redevelop. They have the opposite problem, with a lot of rundown buildings because it's too hard to get consensus from hundreds of landlords. With Singapore, it's the opposite. How to strike the right balance is a very interesting question," says Dr Lee.

She cautions that allowing buildings to be redeveloped at such a pace can mean a loss of urban identity, as well as greater environmental cost from construction, even if the new buildings employ more sustainable technologies.

"History conservation is one of our big agendas for our long-term planning, and it has been stated many times when we talk about our sense of community and identity – but we just keep demolishing and replacing it with new stuff."

But increased square footage and incentives alone do not explain Singapore's demolition spree, says Mr Mok.

He points to Pearl Bank Apartments, built in 1976 and demolished in 2019 to make way for a new luxury development with an equi-

valent floor space and plot ratio.

"Without any plot ratio enhancements, people are still pulling down buildings," he says, adding that smaller units were built to maximise profits.

Pearl Bank Apartments, known for its horseshoe-shape structure, was Singapore's tallest residential building in the year it was completed. The building set the standard for later condominium developments, and architects and the heritage community called for its conservation based on its heritage value, but to no avail.

Heritage is not the only concern. In 2022, Singapore pledged to achieve net-zero greenhouse gas emissions by 2050.

In that light, Mr Mok asks: "When carbon emission becomes an issue, should we be pulling down buildings before their carbon lifespan is over?"

Associate Professor Yeo Kang Shua of the Singapore University of Technology and Design says: "For a more holistic view, embodied carbon must be included in the equation together with operational carbon when discussing environmental sustainability."

Embodied carbon refers to the carbon footprint of a building throughout its life cycle, such as building materials, transportation of materials to the construction site, assembly processes, and dem-

onstrated between the two priorities.

"Heritage, culture, history – these things give people a sense of identity, place and association with certain memories. These are very positive things," he says. "The challenge is quantifying them."

A URA spokesman says the agency adopts a selective approach when it comes to conserving Singapore's built heritage.

Buildings of significance are proposed for conservation, and the agency works with stakeholders to ensure conserved buildings are sensitively restored and integrated with future developments.

Together with the Singapore Land Authority, the URA seeks views from industry partners and the community on the rejuvenation of state properties, such as Aibi Maxwell in Maxwell Road and Vivistop in Kampong Ennos, the spokesman adds.

"Nonetheless, it is not possible to conserve every building with our land constraints," he says. "Therefore, beyond conservation, agencies work with stakeholders on other creative ways to recall and commemorate the heritage and identity of our built environment."

Some developers say that preserving the memory of older buildings was a key design consideration when redeveloping them.

CapitaLand says that in its redevelopment of Pearl Bank Apartments, the new design pays homage to the original iconic horseshoe-shaped structure with new twin C-shaped blocks and roof bridges.

Meanwhile, Mr Alfred Yeung, general manager of Shaw Towers Realty, says his company's redevelopment of Shaw Tower, built in 1975, meant commissioning a study on how the historic building – which once housed Singapore's largest cinema – could be represented in the modernised design, to be unveiled in 2026.

"This includes facade panels from the original wall system, Shaw Brothers logo, Shine auditorium seats, ticket stubs from local theatres and film memorabilia," says Mr Yeung, who adds that the building's redevelopment will increase its floor area by 10 per cent.

THE CASE FOR OLD BUILDINGS

Though not all buildings may merit conservation, experts say the pace of redevelopment in Singapore poses a challenge to ongoing efforts to build a sense of urban identity.

"One of the negative impacts of us freely pulling down buildings before their lifespan is up is the inability for us as a people to have the time to stand back and look at them," Mr Mok says. "You need time to assess the merits of a building."

This is because the architectural value of some buildings is apparent only in hindsight.

In contrast, Dr Ooi takes a different point of view. "If you go building by building, if it's just another skyscraper – in an era when there were so many of them built – even if 10 were torn down, there's still a lot from that era."

He notes that the URA performs a delicate balancing act between the need for development and preserving Singapore's urban heritage. Trade-offs inevitably have to be

THE ALTERNATIVE TO DEMOLITION

THE ALTERNATIVE TO DEMOLITION



BEFORE: UIC Building in Shenton Way was demolished to make way for a new structure with 60 per cent more floor space. PHOTOS: SINGAPORE LAND GROUP

the new. He points to the unique character of buildings from previous eras of Singapore's architectural history, from shophouses to high-rise commercial buildings that came up before the 2000s, as well as old educational buildings.

"Look at New Bahru in Kim Yan Road. They chose a building that was built in the 1940s, and the whole architectural language now exudes trendiness.

"Buildings of a different era have their own character, even simple buildings like HDB flats or unassuming buildings built in the 1980s. And it's a character that people find attractive," he adds.

Adaptive reuse and the preservation of older buildings can also be more cost-effective for smaller enterprises.

"It's easier for new businesses and small fellows to set up, especially compared with shopping centres and new builds which are more expensive."

The case for renovation has also made financial and environmental sense for developers in certain contexts.

A CDL spokesperson says that alongside its redevelopment of Fuji Xerox Towers, the company spent \$70 million on retrofitting and improving Republic Plaza in Raffles Place in 2018 instead of tearing it down. At 280m tall, this skyscraper is the second-tallest building in Singapore.

Singapore Land Group's Mr Heng also points to the Singapore Land Tower in Raffles Place as a successful example of an asset enhancement initiative approach. Its \$160 million renovation, which took three years and is expected to be completed by the end of 2024, resulted in a savings of more than 50 per cent of embodied carbon emissions.

Ultimately, Meinhardt Group's Ms Bhatia concludes that a balanced approach is necessary.

Preserving older structures is not always the greener choice if refurbished buildings have poorer operational emissions, and newly redeveloped buildings' sustainability features may not offset the environmental impact of demolishing them.

With land-scarce Singapore constantly revising its development models, most of the country's re-development projects are now going for high-density, compact, mixed-use developments that follow a "live-work-play-grow-commute-less" model, compared with the single-use developments of the past, according to Ms Bhatia.

"The carbon footprint of these redevelopments and construction projects should therefore not be seen in isolation, but should also consider the socio-economic benefits of these renewed development models," she adds.

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olition and disposal. In contrast, operational carbon is the ongoing carbon footprint from day-to-day operations and energy use over its lifespan.

The climate stakes are not insignificant, considering how the built environment is currently responsible for 39 per cent of global energy-related carbon emissions, according to Ms Ruchi Bhatia, executive director of energy and sustainability at engineering firm Meinhardt Group.

While operational carbon accounts for nearly 70 per cent of a building's carbon emissions, embodied carbon accounts for 30 per cent.

"However, research has shown that if the buildings have a shorter lifespan due to constant urban redevelopments and renewal, the embodied carbon emissions could account for up to 40 per cent of a building's total emissions," she adds.

In response to queries about the sustainability of Singapore's redevelopment, a Building and Construction Authority (BCA) spokesperson says that as part of efforts to implement a more holistic assessment of a building's environmental cost, the statutory board jointly developed the Singapore Building Carbon Calculator with the Singapore Green Building Council and other groups.

This tool facilitates the quantification and planning of carbon reduction strategies from the early design stages. Alongside this new tool, the BCA also administers awards like the Green Mark Platinum for buildings which meet sustainability goals. On this, BCA points to CapitaSky –

redeveloped from the former CPF building – as a promising example of sustainable redevelopment.

"It was the first redevelopment commercial project in Singapore's CBD to achieve 100 per cent reuse of existing bored piles," says the spokesperson. Bored piles are a commonly used form of building foundation.

"This engineering feat saved 8,400 tonnes of concrete and contributed to a 37 per cent reduction in carbon emissions, marking a milestone in sustainable construction."

Experts say one alternative to demolition is retrofitting or adapting older buildings for new purposes, which is alternatively known as adaptive reuse.

Mr Mok believes that adaptive reuse has potential, even if it seems counterintuitive to a society constantly hungry for newness and modernity. "A building – if it has good bones – its ability to be adapted and reused is there," he says. "We cannot brush that off."

And there are charms that can be found only in the old rather than

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SPARED THE WRECKING BALL: Republic Plaza, currently tied for second-tallest building in Singapore, underwent a \$70 million renovation in 2018. PHOTO: LIANHE ZAOBAO FILE



Singapore's sky-high demolitions and redevelopments

Experts say that the Republic's development needs have made tearing down these buildings the financially sound decision, but caution that there is a cost to the environment and urban heritage that should not be overlooked.

BUILDING AGE

33



	OLD	NEW
	Ocean Building	Ocean Financial Centre
Height (m)	119	245
Gross area (sq ft)	466,000	873,000
	↑ Built: 1974	↘ Demolished: 2007

36



	OLD	NEW
	Fuji Xerox Towers	Newport Plaza
Height (m)	165	215
Gross area (sq ft)	524,000	655,000
	↑ Built: 1987	↘ Demolished: 2023

37



	OLD	NEW
	AXA Tower	8 Shenton Way / The Skywaters
Height (m)	235	305
Gross area (sq ft)	1,029,306	1,597,919
	↑ Built: 1986	↘ Demolished: 2023

40



	OLD	NEW
	UIC Building	UIC Building (Commercial) and V on Shenton (Residential)
Height (m)	152	237
Gross area (sq ft)	580,218	934,103
	↑ Built: 1973	↘ Demolished: 2013

41



	OLD	NEW
	CPF Building	CapitaSky
Height (m)	171	185
Gross area (sq ft)	487,401	613,595
	↑ Built: 1976	↘ Demolished: 2017

43



	OLD	NEW
	Pearl Bank Apartments	One Pearl Bank
Height (m)	113	155
Gross area (sq ft)	613,530	613,530
	↑ Built: 1976	↘ Demolished: 2019

45



	OLD	NEW
	Comcentre	Comcentre
Height (m)	165	115
Gross area (sq ft)	1,134,204	1,218,668
	↑ Built: 1979	↘ Demolished: 2024



	OLD	NEW
	Shaw Tower	Shaw Tower
Height (m)	138	198
Gross area (sq ft)	508,057	559,723
	↑ Built: 1975	↘ Demolished: 2020

SOURCES: PERENNIAL HOLDINGS, CAPITALAND, CITY DEVELOPMENTS LIMITED, SINGAPORE LAND GROUP, SHAW TOWERS REALTY, SINGTEL, LENDLEASE, KEPPEL PHOTOS: ST FILE, PERENNIAL HOLDINGS, CBRE, CAPITALAND, SINGTEL, CITY DEVELOPMENTS LIMITED SUNDAY TIMES GRAPHICS