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EXPERT OPINION

Enabling Multistorey Warehouses

It is Time the UK Grasped a Concept That Has Been Successful Across the Globe

Peter Watkins. (HDR)

By Peter Watkins

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Multilevel warehouses are emerging as a compelling proposition and hot topic in the industrial and logistics industry, as developers and investors increasingly evaluate the viability of extending upwards. This is driven by land shortages and higher land values, densification and e-commerce, all factors that affect urban locations and that can be addressed by introducing multistorey logistics. However, to bring this asset class into the

mainstream and realise its full potential requires overcoming some of the roadblocks to adoption.

Well established in Asia (and even exceeding 20 storeys in Hong Kong), multistorey logistics are seeing accelerating momentum in markets including the US and Australia. While Europe is starting to follow suit, it remains a nascent sector in the UK. Segro is one of the leaders in this exciting space, having developed the two-storey X2 warehouse near Heathrow in 2008, widely recognised as the first of its kind in the UK, and currently working on the six-storey V-Park Grand Union in Brent.

Multistorey can help meet certain challenges facing our cities and will increasingly continue to gather pace in the UK. The country's e-commerce market, as an example, is the biggest in Europe, having seen an unprecedented surge in recent years and an estimated 60 million e-commerce users in 2022. Coupled with population growth and evolving consumer expectations, seemingly the current trend of "faster-than-ever deliveries", strategically located last-mile logistics and distribution hubs are crucial to support these shifting dynamics and keep major city regions running seamlessly.

A Centre for London report, meanwhile, shows that London has lost a quarter of its industrial floorspace to other uses in the last 20 years, as Manchester lost 20% and the West Midlands 19% during the same period. This caused a significant supply-demand imbalance that is placing huge pressure on available land, leading to lower vacancy rates and ultimately to rising land and rental values. This is spurring the urgent need for innovative modes of land intensification and building upwards presents one tangible approach; high-rise urban living has been a feature of the city landscape for over 100 years and this new building typology of multistorey warehouses will no doubt also become a feature of our urban landscape.

Overcoming the Technical Challenges

To maximise the space, developers need to take a well-considered approach and understand the key technical differences between single and multistorey sheds, as the latter bring unique challenges. One-storey structures are more lightweight,

straightforward and can be built in as little as six months, whereas adding extra levels on top increases the complexity of the design and layout substantially.

Some of the most significant challenges to viability are spatial planning for column-free spaces capable of supporting heavy loads, the requirement for greater floor load capacity to accommodate goods storage and HGVs, and the loss of lettable area to free up space for access ramps, stair cores and lifts. This last point typically results in higher rents to offset the increased costs; yet it is important to recognise that multistorey may offer a higher amount of lettable space in the end over a single-storey warehouse.

Other technical considerations include the need for deeper foundations, planning around ceiling heights that are far lower than in single-storey examples, as well as overcoming fire and disproportionate collapse issues. Multistorey construction is also slower and more expensive overall, depending on the number of levels and whether features such as ramps are included. Nevertheless, we are seeing strong appetite from industrial developers approaching HDR to explore viable options that can be achieved from an engineering perspective, such as how much loading can realistically be achieved for storage on upper levels in a safe way, and how to optimise the space to add value while aligning with occupiers' needs.

Outside of suburban locations, many developers are thinking about how to integrate logistics into the fabric of cities where building possibilities are more constricted. In this case, placemaking must be at the top of the agenda, especially when logistics assets form part of mixed-use developments or are co-located within residential uses. Sustainability is another vital priority and developers need to assess the embodied carbon, emissions and environmental impact of multi-level logistics in urban settings.

Looking ahead, the trend is here to stay and as the market matures, we will see more evidence to demonstrate that the initial investment is worthwhile. Warehouses will evolve side-by-side with fast-advancing technologies like AI, which enable automation, thereby contributing to making multi-storey logistics more viable and cost effective to operate by boosting productivity and efficiency.

The concept has been proven successful elsewhere as a solution to many of the problems facing cities today, and perhaps it is time for the UK to grasp this incredible opportunity.

Peter Watkins, director of engineering UK at HDR, the global engineering, architecture, environmental and construction services firm

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