

Future Gazing: Logistics³



What's in the box?

2026

Exploring the importance of cubic capacity, increasing height trends and how they influence rents, capital values, and vacancy rates

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Contents

Page 3

FOREWORD

Initial words from Johnny Hawkins

Page 4

SIX KEY POINTS

Six key findings from the report

Page 5

INTRODUCTION

Rising land values, automation technologies and the growth of ecommerce are reshaping how space is designed

Page 7

30 FT HIGH AND RISING

Cubic capacity and clear heights in the warehousing and distribution market

Page 8

WHY GO HIGH?

The reasons behind increasing building heights



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www.knightfrank.com/future-gazing

Page 11

WAYS OF USING VERTICAL SPACE

Exploring different approaches to maximise vertical space within a warehouse

Page 14

DESIGNING SUPPLY CHAIN INFRASTRUCTURE FOR THE FUTURE

Market view from Matthew Wallis, TMX Transform

Page 17

THE FUTURE IN 3D

How high will warehouse heights go?

Page 20

VERTICAL VALUE

The value of vertical space

Page 23

ICE CUBES

Exploring the UK cold storage market

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Foreword



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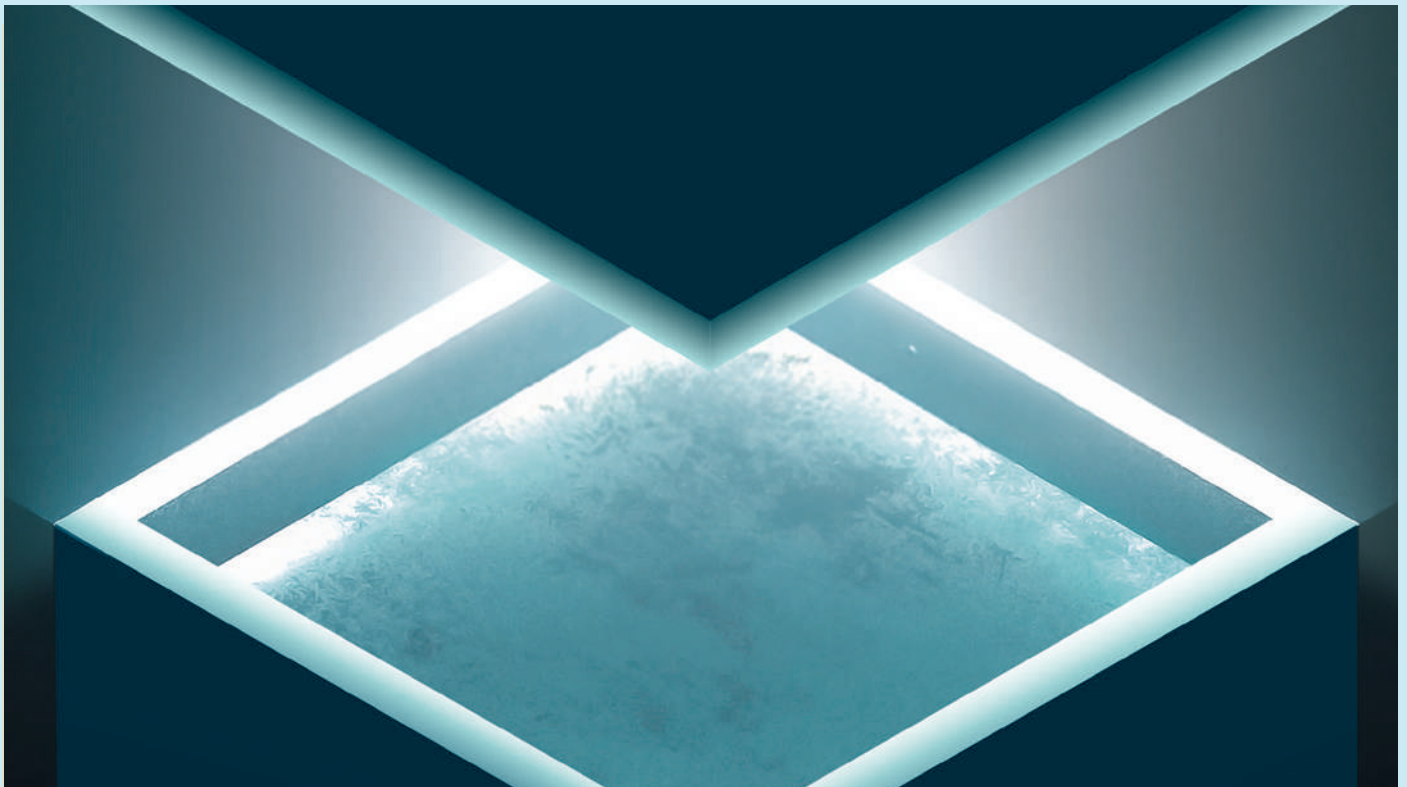
Value creation in the logistics sector is becoming increasingly nuanced. Building height can be a key differentiator, not only for operational efficiency but also for investors seeking assets that deliver resilient, long-term income streams.

Taller, well-specified buildings can support automation, reduce obsolescence risk, and strengthen tenant covenants. Given this operational importance, understanding the economics of cubic capacity is essential. This report examines how height influences rents,

capital values, and future-proofing, and why height and cubic capacity considerations should form part of logistics investment strategies.

Our latest Future Gazing research quantifies these relationships, showing how height impacts rents, vacancy rates, and asset values.

For logistics investors, recognising how the interplay between building specification, including height, fits with operational strategies, automation adoption, and trends in terms of occupier demand and location strategy is crucial. This report prompts a discussion around height and provides the evidence base and practical frameworks to help you price height, assess risk, target growth, and future-proof portfolios by incorporating the “third dimension” into investment decisions.



Key findings



Clear heights are rising:

Average heights for new builds have increased from 8.5 m (28 ft) in 2015 to 11.5 m (38 ft) in 2025, with institutional standards for large warehouses now exceeding 12 m (39 ft).



Drivers of vertical growth:

Land scarcity, rising labour costs, and the adoption of automation are pushing operators to build upwards. High-bay facilities and installations are becoming mainstream for large-scale fulfilment.



Constraints remain:

Planning restrictions, engineering complexity, and operational limitations temper the pace of height increases. Beyond certain thresholds, diminishing returns and escalating costs make further vertical expansion uneconomic.



Regional divergence:

Yorkshire, London and the South West lead in height growth. The East Midlands remains dominant for mega-sites, but regional fulfilment models are gaining traction driving up heights in other markets. In London, planning pressures and high land/rents values will continue to drive intensification strategies but shifting planning policies will shape future building formats.



Investment implications:

Taller, well-specified buildings offer strategic advantages beyond immediate rental uplift, including future-proofing, automation readiness, and reduced obsolescence risk. While height explains around 10% of rental variation, its operational value can be far greater.



Cold storage opportunity:

Aging cold-storage infrastructure, stricter environmental regulations, and rising consumer demand for fresh and frozen foods – alongside growth in temperature-controlled pharmaceuticals and vaccines – are driving the need for more high-bay, automated cold storage facilities. This trend is creating a niche investment segment characterised by strong demand and limited supply.

Introduction

Rising land values, automation technologies and the growth of ecommerce are reshaping how space is designed, utilised, and valued. Cubic capacity is becoming increasingly important from an operational perspective. Supply chain specialists and automation technology firms are focused on maximising how operators make use of this space. However, it is not well understood as a property metric.

This report explores the evolution of clear heights in UK warehousing, the drivers behind vertical expansion, and the implications for occupiers, developers, and investors. Drawing on proprietary datasets and market analysis, we examine how cubic capacity is redefining fulfilment strategies, influencing rents and capital values, and creating new opportunities in both ambient and temperature-controlled markets.

The traditional and widely accepted way to measure a real estate asset's size, regardless of property type, is in square feet or metres. However, trends in the industrial sector, particularly the growth of ecommerce and advancements in automation

technology, have increased the importance of a building's cubic volume. Understanding this metric and how best to utilise it has become a key factor for operators seeking to improve supply chain efficiency.

Given its value to occupiers, investors need to better understand volume, why it's becoming more important for occupiers, how it could impact values, both now and into the future, and most importantly, how could it help inform your industrial property investment strategy.

“Cubic capacity is becoming increasingly important from an operational perspective. Supply chain specialists and automation technology firms are focused on maximising how operators make use of this space.”

“Rising land values, automation technologies and the growth of ecommerce are reshaping how space is designed, utilised, and valued.”



30ft high and rising

Cubic capacity and clear heights in the warehousing and distribution market

TOTAL CUBIC CAPACITY

Drawing on VOA records and proprietary property datasets detailing building clear heights, our Geospatial team has calculated the net internal volume of warehousing stock (buildings of 100,000 sq ft or more) across England and Wales. With a total footprint of 681 million sq ft and approximately 28 billion cubic feet of internal volume, corresponding to an average clear height of around 41 feet (12.5 metres) for the existing stock.

CURRENT CLEAR HEIGHTS

Of course, this is total built stock, regardless of age, location or size. But, what clear heights are being built to now? And how does it vary by size of unit?

For a unit under 20,000 sq ft built in 2025 or currently under construction (as of end of 2025), the average clear height is 22 ft (6.7 m). For buildings 20-50,000 sq ft, this rises to 32'1" (9.8 m), to 40'11" (12.5 m) for 50-100,000 sq ft buildings, 50'3" (15.3 m) for 100-250,000 sq ft buildings, 58'11" (18.0 m) for 250-400,000 sq ft and for a unit greater than 400,000 sq ft, the average clear height is 60'4" (18.4 m).

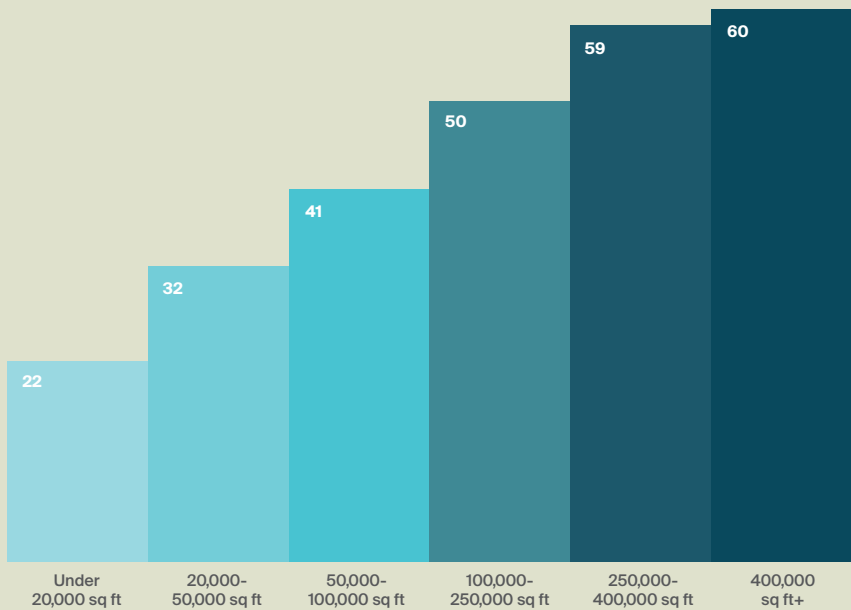
Unsurprisingly, the data shows that units of 100,000 sq ft plus that are currently under construction or recently built, have higher average clear heights than those found across total stock. That is, buildings are getting taller.

Looking specifically at buildings over 20,000 sq ft, the average clear height for buildings built or under construction in 2025 is 37'9" (11.5 m). In 2024, it was 35'2" (10.7 m), ten years ago (2015) it was 28'0" (8.5 m), twenty years ago (2005), 24'10" (7.6 m).

RISING CLEAR HEIGHTS

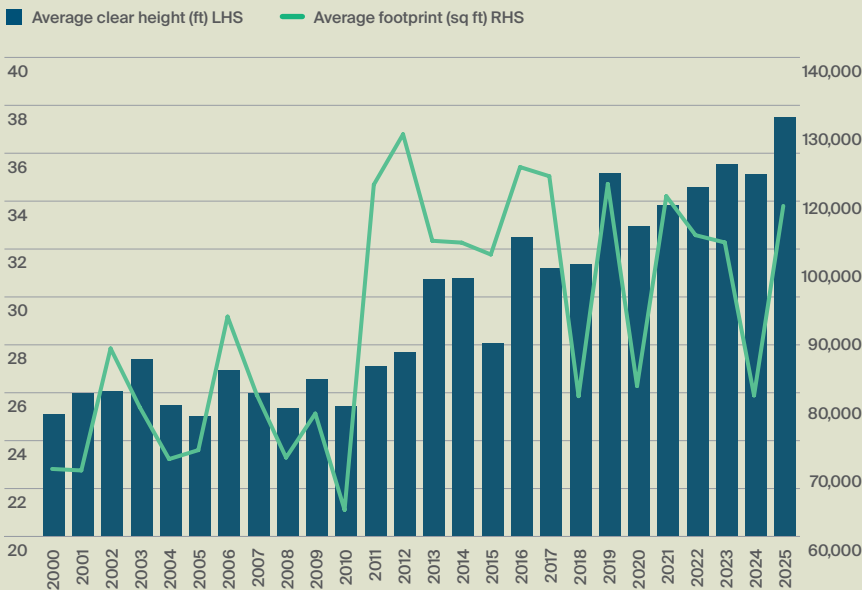
As the chart shows, there has been a notable upward trend in clear heights

Average clear height of buildings completed in 2025 or currently under construction (ft)



Source: Knight Frank Insight

Clear height by year built (units over 20,000 sq ft)



Source: Knight Frank Insight

since 2010. However, in the decade prior, clear heights remained broadly stable. Clear heights averaged around 26 ft (7.9 m) between 2000 and 2009, increasing to an average of around 30 ft (9.1 m) between 2010 and 2019, and averaging around 35 ft (10.7 m) for buildings built since 2020.

So, will we see 40 ft (12.2 m) average clear heights by 2030? These heights are already institutional standard for larger (100-300,000 sq ft) warehouses, with even higher eaves (c.15 m+) for units over 300,000 sq ft.

Building footprints have increased too, though not by the same degree. The chart shows that average footprints can vary on an annual basis but have tended to be above 100,000 sq ft since 2011. Yet didn't reach this (as an average) between 2000-2010.

For stock built between 2000 and 2009, units over 400,000 sq ft accounted for less than 4% of properties. However, since 2020, this size band (400,000 sq ft+) has accounted for 8% of properties.

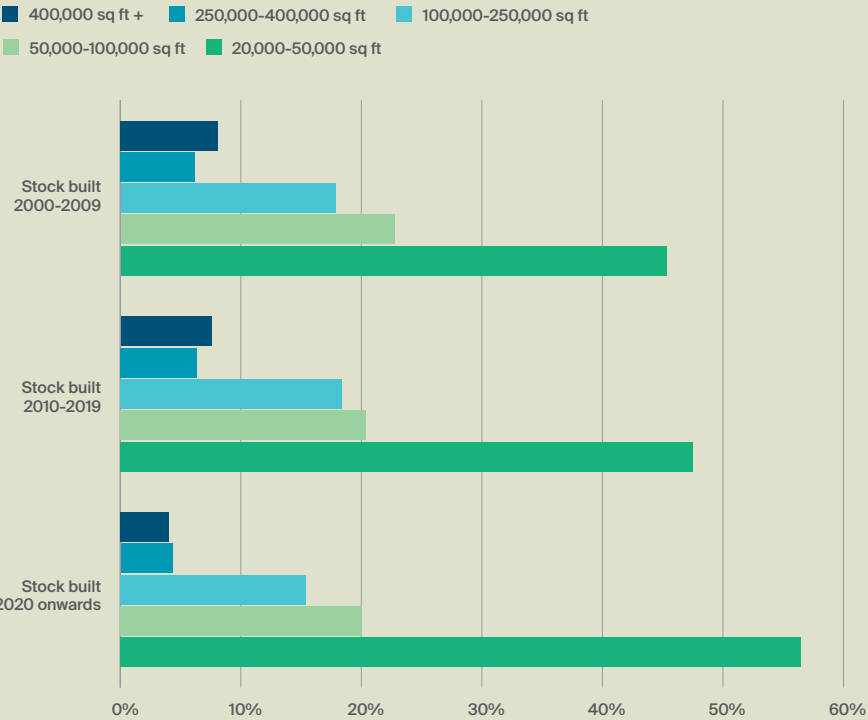
Over the past ten years, clear heights have increased over all size bands. Though they have increased most in the largest size bands. In the 400,000 sq ft+ size band, average clear heights have increased from 41.8 ft (12.7 m) to 57.4 ft (17.5 m), a 37% increase. In the 250-400,000 sq ft size band, clear heights have increased 24%, while the smaller size bands recorded smaller increases.

In the 100-250,000 sq ft size band, average clear heights have increased less over the past ten years, however, in this size band, clear heights had increased significantly in the previous ten years, from 32.2 ft (9.8 m), to 38.5 ft (11.7 m), so the growth in this size band appears to have already come through.

“Over the past ten years, clear heights have increased over all size bands. Though they have increased most in the largest size bands.”

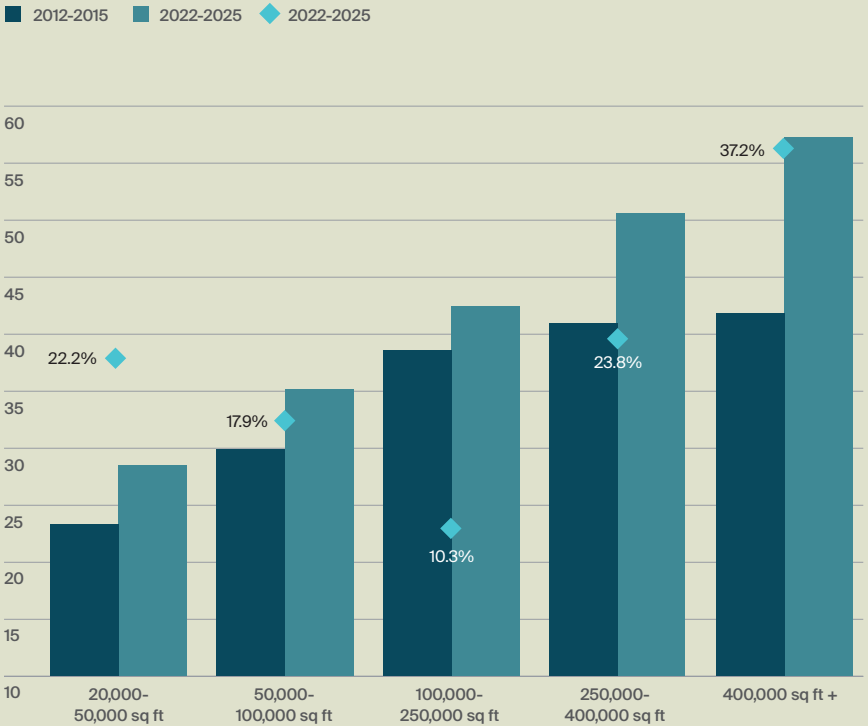
Units getting bigger

% of stock (floorspace) by size band



Source: Knight Frank Insight

The rise in average clear heights by size band over the past ten years
sq ft



Source: Knight Frank Insight

Why go high?

The reasons behind increasing building heights

THE OPERATIONAL DRIVERS FOR INCREASED BUILDING HEIGHTS

The push towards taller warehouse buildings is primarily driven by the need to minimise costs while maximising operational efficiency. Operators must balance a range of expenses, including land acquisition, construction, labour, automation technology and energy, against the imperative to improve throughput and reduce overheads. As land and labour costs continue to rise and automation becomes more affordable, the economic case for building upwards rather than outwards strengthens. A smaller footprint not only reduces land requirements but can also lower energy consumption, particularly in climate-controlled environments. However, this approach is not without limitations, which may include planning restrictions, functional constraints or prohibitive capital costs.

Several factors influence the decision to increase building height. First, taller structures enable significantly greater pallet capacity by accommodating multiple levels of racking within the same footprint. This is especially critical for ecommerce operations, where diverse product ranges and fluctuating inventory levels demand high-density storage solutions. Second, a reduced footprint translates into lower operational costs, as smaller roof and floor areas require less energy for cooling and temperature control, an important consideration for cold storage facilities. Third, advancements in automation technology, such as Automated Storage and Retrieval Systems (AS/RS), make ultra-high-bay storage feasible, unlocking efficiencies that

manual operations cannot achieve. Finally, rising land costs, particularly in urban locations, make vertical expansion more cost-effective than horizontal sprawl.

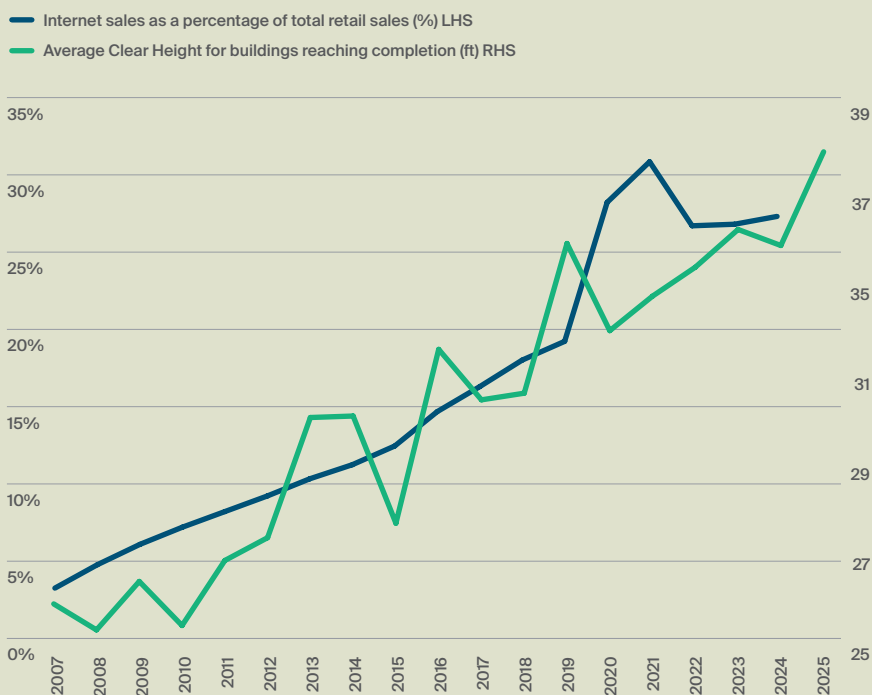
These drivers have a direct impact on building design. In the UK, standard big-box logistics buildings typically top out at clear heights of around 12–18 metres (39.4–59.1 feet). Heights 30–50 metres (98.4–164.0 feet) are almost exclusively high-bay AS/RS (often cold storage) where the racking is the structure (rack-clad). Such designs represent a significant departure from traditional warehouse construction, reflecting the growing importance of automation and vertical optimisation in modern logistics.

ECOMMERCE AND THE DRIVE FOR HEIGHT

The shift to online has changed how goods are stored and processed within a warehouse, with a need for high-density storage and rapid order fulfilment, and a shift away from bulk pallet storage. Facilities need to manage a wider variety of Stock Keeping Units (SKUs) and process thousands of individual orders daily. This necessitates more efficient, high-density, high-velocity storage solutions.

In 2021, we analysed the relationship between online spend and occupied floorspace, and found that for every £1 billion spent in the UK online, there was 1.36 million sq ft of *logistics space*.

Clear heights and ecommerce have risen in tandem



Source: Knight Frank Insight, ONS



Online sales were, and continue to grow, and the amount of floorspace needed to service this growth also needs to rise. However, while our study acknowledged that the relationship between floorspace and online sales may change as efficiencies improve, we didn't consider the third dimension and the impact changing heights could have on floorspace requirements.

Yet cubic capacity is a critical metric for ecommerce, and clear heights are increasing. This means that how efficiently ecommerce operators use floorspace is improving. Increasing clear heights from 10 m (32.8 ft) to 12 m (39.4 ft) effectively increases the cubic capacity of a building by 20%, or increasing the eaves to 15 m (49.2 ft), by 50%.

Since our analysis was done, average clear heights have increased from 10 m (32.8 ft) (for buildings built in 2020), to 11.4 m (37.4 ft) for buildings built in 2025, an increase of 14%. It is also worth noting that our analysis also included stock built in previous years, when clear heights were lower still.

This 14% increase in clear heights has a corresponding increase in cubic capacity, and could result in reducing floorspace requirements by a similar percentage. If clear heights continue to increase at this rate, we could see average clear heights of 13 m (42.7 ft) by 2030, which would represent a 30% increase in cubic capacity from those buildings built in 2020 (and even more compared with older stock). These rising building heights could alter the relationship between online spend and floorspace, reducing projections for future floorspace demand by a corresponding percentage.

It is worth noting, that while height may be important and usable in a fulfilment centre, for urban (last-mile) logistics, height is typically less useful, due to more manual operations and the importance of throughput speed. As our Future Gazing 2022 work found, around 20-25% of ecommerce floorspace is found in urban or last mile logistics units. These smaller units have not seen the increase in heights that larger fulfilment centres have, however, in the future, the adoption of automation in these

*“However, this focus on **floorspace** neglects to consider that intensification – from an operational standpoint – could be achieved through increased clear heights, which may, for some operators, be preferable over additional floors and floorspace.”*

facilities (as well as high land values and increasing land pressures) may drive ecommerce operations to seek greater ceiling heights in these facilities.

Mintel forecast online retail sales to rise from £125 billion in 2024, to around £151 billion by 2030. According to our previous analysis this would result in an additional 35 million sq ft of floorspace. Yet, if we account for a ~25% increase in the clear heights (excluding the last mile units) and therefore the capacity of buildings, the amount of additional floorspace required would reduce to around 28 million sq ft, with around 21 million sq ft of this needed in larger (fulfilment or sortation) facilities.

RIISING LAND PRESSURES

Rising populations are putting increased pressure on land, particularly in urban areas. Competing pressures for land in London (and other cities) have eroded the supply of industrial land, and planners have sought to maintain current floorspace through the intensification of sites (see planning policies in the current London Plan). This can be achieved either by reducing yard space or by increasing the number of floors.

However, this focus on floorspace neglects to consider that intensification – from an operational standpoint – could be achieved through increased clear heights, which may, for some operators, be preferable over additional floors and floorspace.

Currently, in Greater London, there is approximately 175 sq metres (of land) per person. According to the Greater London Authority (GLA), the population of London is forecast to rise by around 4% over the next ten years, and this will mean continued pressures on land supply, with the amount of land per person expected to decrease to around 167 sq m by 2035.

Competition for prime sites can also drive a premium in terms of land values at ports or airports, for example. Efficient use of land will be increasingly important as the UK population rises and becomes increasingly concentrated in urban areas.

LABOUR COSTS/AVAILABILITY AND AUTOMATION

Labour and energy represent the two largest costs in the warehouse. And, labour availability can be just as much of a challenge as costs. Automation is the great enabler when it comes to making use of greater clear heights.

It does come at a price, however, and weighing up the significant upfront costs associated with implementing automation technology against the uncertainties around future labour costs and availability is a key determinant of operators' adoption of automation and demand for greater clear heights.

Minimum wage and tax changes have driven up labour costs, particularly at the lower end of the scale, prompting employers to reduce their reliance on lower-cost labour. The minimum wage is set to rise to £12.71 per hour in April 2026 (for workers aged 21 and over). This is 43-52% higher than it was five years ago (depending on age group). Employer's National Insurance contributions have also risen. The employer's national insurance contribution for a 21-year-old on minimum wage working 35 hours a week has risen by 209% since 2021, from £879.23 to £2,719.83.

The salary and tax costs of employing a 21-year-old on minimum wage (working 35 hours a week) have risen 61% over the past five years (from April 2021 to April 2026). Making an increasingly strong case for adopting automation within the warehouse.

Warehouse automation costs vary significantly depending on the level of automation and size of facility. However, rising labour costs mean that potential returns on investment (ROI) can be realised sooner, and with financing costs falling, adoption of automation technology in warehouses is expected to continue rising.

HEIGHT AND THE IMPACT ON VACANCY

Clearly, there is a growing demand from occupiers for taller buildings. This is demonstrated through higher vacancy rates for buildings with lower clear heights compared with those with higher clear heights.

Analysing built stock constructed prior to the end of 2024 (so as to exclude newly built speculative developments from skewing the findings), we found that units over 400,000 sq ft that have a maximum clear height of 40 ft (12.2 m), have a vacancy rate of 6.6%. Double the rate for buildings of that size with clear heights in excess of 40 ft (3.3%).

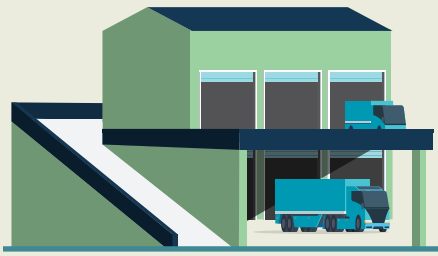
Age and grade of building will also be important factors in determining vacancy, as will other performance-related metrics. However, factors such as grade and building age are often better accounted for through regular reporting metrics, as well as owners' understanding of obsolescence risks and capex requirements.



“Units over 400,000 sq ft that have a maximum clear height of 40 ft (12.2 m), have a vacancy rate of 6.6%. Double the rate for buildings of that size with clear heights in excess of 40 ft (3.3%).”

Ways of using vertical space

There are different approaches to maximise vertical space within a warehouse. Vertical storage capacity can be boosted through three main approaches: multi-storey construction, mezzanine floors, and high-bay systems. Each of these formats has distinct design, cost, and operational implications.



1. MULTI STOREY

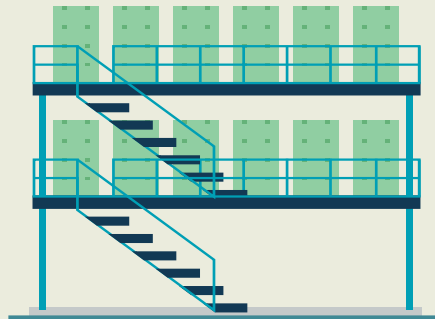
Adding additional floors can significantly boost storage capacity, particularly in high-density urban markets where land is scarce. There are two main approaches, categorised by how upper levels are accessed:

- **External ramps:** These are expensive to build and typically designed for vans rather than HGVs, making them viable only where land costs or availability are highly restrictive.
- **Internal lifts:** These provide dual levels of accessible floor space, with yard access limited to the ground floor. Upper levels are serviced by goods lifts or mechanical handling equipment (MHE). These facilities are often divided into small units rented to multiple businesses. However, limited control over the building fabric can make them unsuitable for uses requiring external heating or cooling equipment. Internal lifts also perform poorly for high-throughput distribution.

The multi-storey model is well-established in Asia (Singapore, Tokyo, Hong Kong) but remains rare in the UK. The UK's first true multi-storey

warehouse, X2 at Heathrow, was built in 2008 with two levels and HGV access via ramps. Most UK examples, however, use internal lifts rather than ramps. These facilities are expensive and only cost-effective where rents and land values are high, and where upper floors can be let at rates that offset additional build costs.

Design must prioritise operational requirements. Shared yard space and reliance on lifts can create bottlenecks, slowing throughput and compromising functionality.



2. MEZZANINE FLOORS

Mezzanine floors offer a flexible and cost-effective way to maximise vertical space without major construction or relocation. They can be retrofitted and tailored to support manual picking, packing, and automation.

The number of mezzanine levels depends on building height, head clearance (typically 4.5–5.0 m (14.8–16.4 ft) per level), load capacity, and compliance with fire and building regulations. The goal is to double or even triple usable space. However, beyond certain thresholds, extra height does not translate into

additional floorspace. For example, if each floor requires 5 m (16.4 ft) clearance, increasing clear height from 15 m (49.2 ft) to 18 m (59.1 ft) offers no benefit if the extra 3 m (9.8 ft) cannot be used effectively.

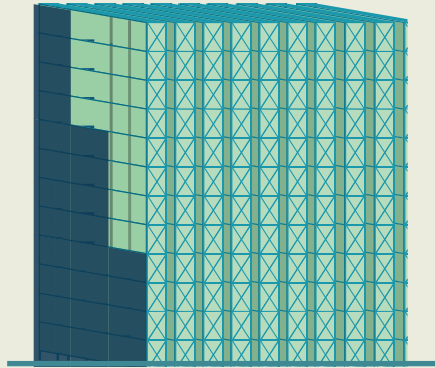
Mezzanines can be installed partially, providing different clear heights for different operations, and can also accommodate office space with lower height requirements.

They are generally considered semi-permanent structures and often have favourable implications for business rates compared to permanent extensions. Lightweight, freestanding, and relocatable mezzanines are typically treated as equipment (similar to racking) rather than part of the permanent structure, meaning they may not affect business rates. However, permanent mezzanine structures, multi-tier mezzanines with concrete floors integral to the building design, may be assessed differently for both rent and rates.

An occupier will typically bear the cost of installing a mezzanine structure, and their floorspace is therefore not generally rentalised. However, they are normally left in

“Mezzanines can be installed partially, allowing different clear heights for different operations, and can also accommodate office space with lower height requirements.”

situ when a tenant leaves a building, and a new prospective tenant may be willing to pay more in rent if they're able to make effective use of a previous tenant's fit-out.



3. HIGH BAY WAREHOUSE

High bay systems use extremely tall racking to maximise the use of vertical space. Operations vary from manual rack systems to fully automated solutions and bespoke configurations. They will often incorporate automation such as stacker cranes and Automated Storage and Retrieval Systems (AS/RS), enabling high-density storage for pallets and other loads. These facilities typically range from 12 m (39.4 ft) to as much as 50 m (164 ft) in height, with the primary objective of exploiting the full volume of the building.

There are two main structural approaches:

- **In-house design:** Racking installed within a conventional building. For example, a 24 ft (7.3 m) clear height accommodates four pallet racks, while 36 ft (11.0 m) allows for six – around 50% more space. However, taller systems require specialised racking, forklifts and inventory systems designed for taller spaces.
- **Silo (Clad-Rack) design:** The racking system itself serves as the load-bearing structure for the roof and walls, eliminating the need for a separate frame, reducing the construction time and cost for facilities exceeding 20 m (65.6 ft).

Automation also allows for narrower aisles, further optimising space utilisation. Aisle width depends on the handling equipment and the dimensions of stored goods. Advanced Warehouse Management Systems (WMS) are generally used to control automation, manage inventory and optimise throughput.

While most high-bay warehouses use steel construction, examples of timber structures exist in Europe.

AUTOMATION: DESIGNED FOR HEIGHT

Automation plays a key role in maximising the vertical capacity of modern warehouses. By deploying technologies such as stacker cranes, Automated Storage and Retrieval Systems (AS/RS), and Autonomous Mobile Robots (AMRs), businesses can store and retrieve goods at heights far beyond the limits of manual operations, eliminating the need for

wide aisles and low-level access. This enables high-density configurations within the same footprint, improving speed and efficiency.

For ecommerce, where operators need to fulfil many small orders of various items very quickly, automation is often a key differentiator, enabling faster postage options and a greater variety of stocked items, which can enable operators to boost retailers' market share.

“High bay systems will often incorporate automation such as stacker cranes and Automated Storage and Retrieval Systems (AS/RS), enabling high-density storage for pallets and other loads.”



While automation technology can also offer much greater speed of throughput compared with manual operations, it can be expensive to install. However, financial models such as Automation-as-a-Service (AaaS) are lowering barriers to entry by offering subscription or leasing options, reducing upfront capital requirements.

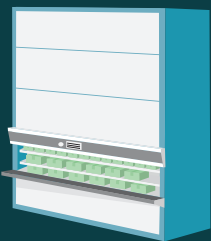
Many large-scale automation systems can operate as effectively on a vertical axis as they can on a horizontal one. However, the optimal building dimensions will depend on specific operational considerations as well as building design considerations.

AUTOMATED STORAGE AND RETRIEVAL SYSTEM TECHNOLOGIES

The ASRS technologies on the market handle different volumes, types and velocities of non-palletised inventory at variable speeds to accommodate varying throughput demands.

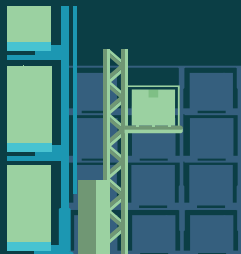


AUTOMATED STORAGE CAN BE BROKEN DOWN INTO FOUR MAIN GROUPS:



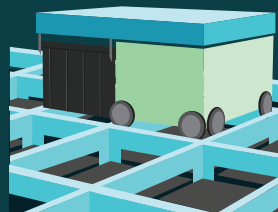
1. Modular Systems

These include Carousel Modules (VCMs and HCMs), Vertical Lift Modules (VLMs) and Vertical Buffer Modules (VBM). These enclosed storage systems that are relatively cost-effective and scalable within existing warehouses.



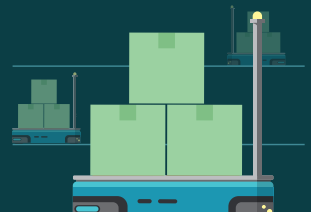
2. Crane Based Mini Load AS/RS

Dedicated cranes handle dense storage aisles for cases, totes, or trays.



3. Robotic Cube Storage

In a Robotic Cube Storage System, all inventory is placed into bins and stacked inside a cube. Smart robots work at the top of the cube to shuffle, sort, and retrieve bins and deliver them to a workstation (port) as needed. This type of system can deliver increasingly higher throughput based on the number of independently moving robotic shuttles inducted into the system.



4. Floor Robots (AGVs/AMRs)

AGVs & AMRs are used to retrieve and transport stored goods to an operator access area.

Designing supply chain infrastructure for the future



MATTHEW WALLIS
TMX Transform

INTRODUCTION

In an era defined by constrained capital, labour shortages, and rising customer expectations, supply-chain infrastructure must be designed not just for today's efficiency, but for tomorrow's agility and scalability.

This commentary explores two strategic levers, brownfield optimisation and greenfield height utilisation. Summarising on how to balance footprint with cubic capacity whilst identifying how these can position warehouse networks for long-term advantage.



1. OPTIMISING BROWNFIELD FACILITIES

When capital is tight and property costs are high, extracting more capability from existing sites becomes vital. By deploying mezzanine floors and revisiting layout and flow, businesses can "sweat" current assets or invest in existing market opportunities rather than face the cost and disruption of new builds.

"Research from Knight Frank shows that older warehouses with lower clear height have twice the vacancy rate of modern units, underlining the value and potential of retrofitting."

SWEATING CURRENT ASSETS / ADAPTING LOWER HEIGHT BUILDINGS

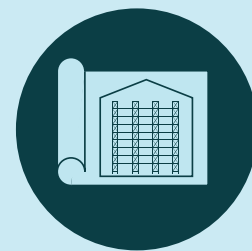
Adding mezzanine levels in warehouses with 6–8 m clear height can double or triple usable floor area without expansion. Similarly optimising internal workflows through smarter racking design, shorter travel distances, rationalised pick paths, or low-level automation can also boost throughput and reduce OPEX.

Research from Knight Frank shows that older warehouses with lower clear height have twice the vacancy rate of modern units, underlining the value and potential of retrofitting. Any modification, however, must consider fire strategy and building control compliance, as changes in these areas can affect insurance coverage and also operational readiness whilst introducing significant costs.

MANAGING COMPLEXITY AND DISRUPTION

Upgrading a live brownfield facility introduces complexity: structural work, bespoke mezzanine design, integration with legacy systems – all while maintaining operations. Businesses must assess whether they have the flexibility and resilience to tolerate disruption and whether the operational/capacity gains justify it.

If well planned and managed, the payback can be significant – but success depends on robust project and change management.



2. USING HEIGHT IN GREENFIELD FACILITIES

When building from scratch, the vertical dimension is a major lever for capacity gains. While countries like Australia and Germany routinely build 30–45 m high-bay warehouses, the UK remains cautious due to planning restrictions and local regulations.

INVESTMENT PLANNING & AUTOMATION SELECTION

When planning investments in an ASRS (Automated Storage & Retrieval System), the scoping strategy must be driven by rigorous data scrutiny to define the optimal in the following areas:

- Building Dimensions
- Clear Heights
- System Capacity
- Material Flows

A detailed analysis of SKU profiles, growth forecasts, throughput requirements, and storage density allows you to right-size both the automation and the building envelope. Effective planning and business engagement allows the investment to remain future proof without costly / disruptive retrofits or structural adaptations later.

By validating volumes and potential growth / business change early – rather than designing to today’s circumstances alone you can ensure that the ASRS and its supporting construction deliver long-term scalability, cost efficiency and resilience to changing business needs.

PLANNING CONSTRAINTS

UK planning authorities often cap eaves height, building volume, traffic and parking as part of approvals. As one study notes, “In the UK, warehouse height rises in line with local restrictions rather than material-handling capability.” In dense urban areas like London, planning objections around height, overshadowing, and traffic often further limit development.

Though average eaves heights have increased from 5 m to roughly 14 m over 50 years (Centre for Sustainable Road Freight) the pace is modest. Every extra 5 m of height can add 25–35% storage capacity, highlighting the case for taller designs.

For ASRS, 18–25 m typically delivers a strong ROI; beyond this,

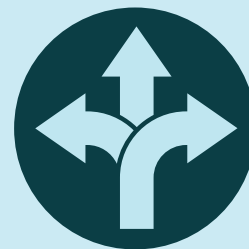
storage density can reach additional capacities of 60–180%, albeit at higher structural cost.

IMPROVING THE ODDS

While external limits can’t be eliminated, businesses can improve outcomes by:

- Engaging planning consultants early to identify achievable heights and objections
- Selecting sites zoned for logistics or within strategic logistics hubs
- Proactively addressing visual, traffic, and environmental concerns
- Use a phased build-approach – Future-proofing by building higher shells that can later accommodate automation or racking extensions
- Assessing costs and complexity of excavating into a basement

Early, data-driven engagement and planning increases the likelihood of achieving greater cubic capacity and long-term flexibility.



3. CHOOSING THE RIGHT MODEL: BALANCING FOOTPRINT AND CUBE

STRATEGIC TRADE-OFF

For new facilities or major refurbishments, businesses must decide between building horizontally (footprint), or building vertically (height), or hybrid approaches such as multi-level pick zones or below-ground docks. All have benefits and opportunities but also impose increased build costs or elevated operational costs over the life of the building.

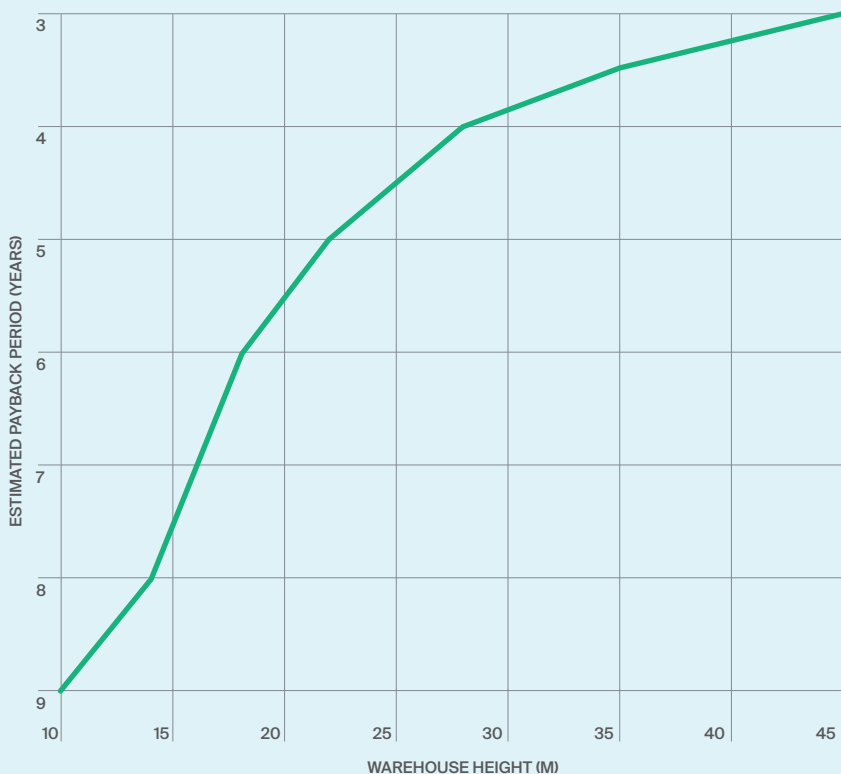
COST, COMPLEXITY, AND PAYBACK

Basement or tower construction drives up CAPEX, while automation systems like ASRS add structural and integration costs. Yet ASRS can improve storage density 3-4 times and reduce footprint by up to 75%, provided the payback aligns with business needs.

High-bay (e.g., 45 m) automated warehouses cost more to build but often deliver lower OPEX smaller footprints mean less lighting, HVAC, and energy use (up to 25% reduction in some studies).

Ultimately, the chosen model must align with throughput, service-level expectations, and capital capacity.

High-bay ASRS ROI potential by height



Source: TMX

“For new facilities or major refurbishments, businesses must decide between building horizontally (footprint), or building vertically (height), or hybrid approaches such as multi-level pick zones or below-ground docks.”



AUTOMATION, DATA AND DESIGN DISCIPLINE

Whether retrofitting a mezzanine, building high-bay, or deploying automation, decisions must be grounded in robust data: throughput, SKU profiles, growth forecasts, and labour sensitivity.

Clarity on the primary driver be it cost reduction, capacity growth, service improvement or to mitigate concerns over future socio-political risks is essential. Partnering with industry experts such as TMX Transform helps align strategy, design, procurement, and delivery, ensuring the investment meets both current and future operational needs.

CONCLUSION

In a market where land is costly, labour scarce, and customer demands rising, logistics infrastructure must embody flexibility, density, and durability. Whether optimising brownfield assets, designing taller greenfield sites, or selecting the right balance of footprint and cube, each decision directly shapes resilience and competitiveness for the future.

With disciplined, data-led design and early expert engagement, supply-chain infrastructure can evolve from a fixed cost to a strategic enabler of performance and growth. Having the right people to support and engage with your business during this period is key to success, and at TMX Transform

an end-to-end support function exists. From designing your network strategy through project completion, and ongoing maintenance a full service can be provided to support your needs.

“Land scarcity and rising urban land values often justify building upwards, especially in dense markets. Taller warehouses can maximise throughput and operational efficiency, particularly when paired with advanced automation.”

The future in 3D

How high will warehouse heights go?

Operators are under increasing pressure to improve efficiency. The recent arrival of new Chinese retail platforms will drive increased competition in the UK ecommerce market, and this will mean a continued focus on operational efficiencies and perhaps greater diversity in terms of operational models. Automation and building height are set to remain important, especially as low-skilled labour costs continue to rise.

So, will we see building heights continuing to rise at the same pace, or will this momentum slow? Where will we see building heights increase most, and why? To answer this, we need to examine both the drivers and constraints.

DRIVERS OF HEIGHT

Land scarcity and rising urban land values often justify building upwards, especially in dense markets. Taller warehouses can maximise throughput and operational efficiency, particularly when paired with advanced automation. Technology such as Automated Storage

and Retrieval Systems (AS/RS), Autonomous Mobile Robots (AMRs), and Automated Guided Vehicles (AGVs) enables safe and efficient operations at heights far beyond manual limits. These systems reduce aisle widths, increase storage density, and boost speed and accuracy, critical for ecommerce fulfilment.

Financial innovation will also shape adoption. Models such as Automation-as-a-Service (AaaS) allow businesses to access cutting-edge systems without heavy upfront investment. Government incentives like Full Expensing (FE) continue to support capital expenditure, although they are less generous than the previous super-deduction scheme (2021–2023), which offered 130% relief on qualifying investments, spurring an uptake in automation. These factors will help offset the cost of automation and encourage the construction of taller, more technologically advanced facilities.

“Taller warehouses can maximise throughput and operational efficiency, particularly when paired with advanced automation.”

CONSTRAINTS ON HEIGHT

Despite these drivers, growth in building height will not be limitless. Engineering complexity and cost rise sharply beyond certain height thresholds because structural design must accommodate heavier loads, wind forces, and precise floor tolerances. Fire safety regulations impose additional requirements, with advanced detection and (in-rack) sprinkler systems needed for heights above 15 m (49.2 ft).

Operational considerations also matter. Multi-storey formats can compromise throughput because of shared yards and reliance on lifts, while automation systems have practical height limits and significant capital costs. Occupiers' appetite for taller buildings is also not universal; not all operations need tall buildings. Cross-dock facilities, for example, typically require only 6 m (19.7 ft) of clear height because goods move quickly and do not require long-term storage.

Planning restrictions can also limit heights. Height and scale often attract public scrutiny, and policy caps may force developers to seek alternatives such as digging down, which adds cost and complexity.

Automation systems also have limits. For instance, eaves of 10 m (32.8 ft) allow four or five pallet rack tiers, but ceilings above 40 ft (12.2 m) require different lift trucks and material-handling equipment, which is cost-prohibitive for many companies.



FUTURE FORMATS

Future development will be shaped by a mix of economic, technological, and regulatory forces. Land scarcity and rising urban values often justify building upwards, but operational efficiency and throughput remain the primary drivers for taller buildings.

Multi-storey warehouses will remain niche in the UK, viable only in high-value urban locations where rents justify additional build costs. Urban land shortages and rising rents have driven multi-storey development in London, largely due to planning policy and the loss of industrial land. However, these facilities appeal to a limited pool of occupiers, and amendments to the Use Class Order in 2020 are shifting industrial planning policies. The high build and financing costs associated with this format, coupled with slowing rental growth, will further reduce the pace of multi-storey development.

Single-storey formats designed for mezzanines or high-bay automation are expected to dominate, though planning pressures may limit extreme heights in some locations. Beyond certain thresholds, diminishing

returns combined with escalating structural and safety requirements will make upward expansion uneconomic. For example, if mezzanine floors require 5 m (16 ft) clearance, increasing the clear height from 15 m (49 ft) to 18 m (66 ft) offers no benefit if the additional space cannot be used effectively. As clear height rises above 32 ft (9.8 m), slab flatness becomes critical for racking stability and forklift operations. Column spacing and wall width may need adjustment for larger forklifts and sturdier roofs, while lighting and fire safety require careful planning.

The development of taller buildings will be closely tied to automation strategies and will continue only in locations where occupier demand and the additional costs can be justified.

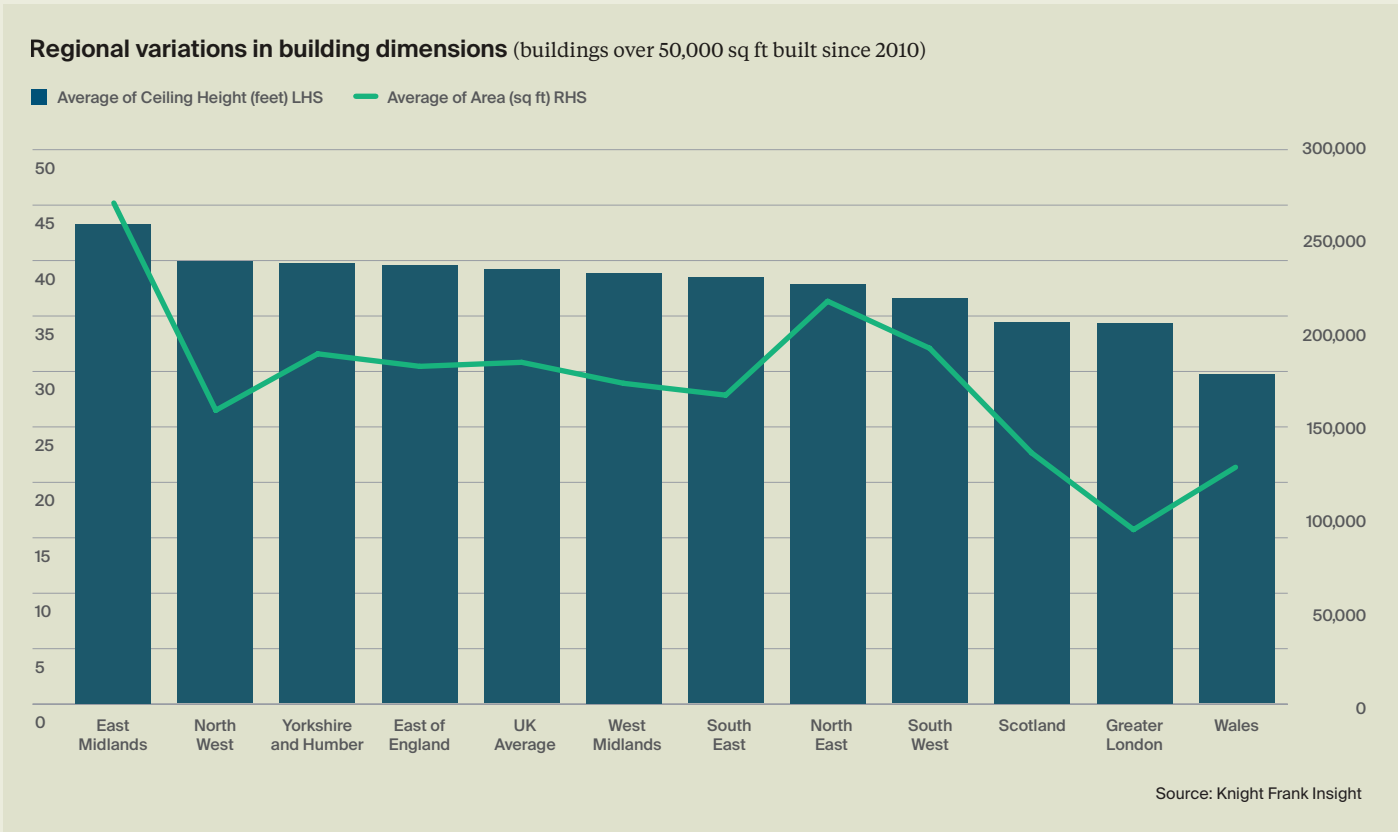
WHERE WILL WE SEE TALLER BUILDINGS?

Demand for taller buildings will be strongest in regions hosting large-scale fulfilment centres. The East Midlands leads in average clear heights, exceeding 40 ft (12 m), mainly due to the prevalence of very large facilities rather than

“The East Midlands leads in average clear heights, exceeding 40 ft (12 m), largely due to the prevalence of very large facilities.”

consistently. At the other end of the spectrum, Wales records the lowest average heights, reflecting its dominance of smaller units.

Interestingly, the North East shows relatively low overall averages (due to typically smaller units) but boasts the UK’s tallest buildings in the largest size band (400,000 sq ft+). Greater London also sees higher-than-average heights for its largest units, driven by land values and the need for space efficiency, though mid-sized units remain well below the UK average. For units between 100,000-250,000 sq ft in London, clear heights are much lower than the UK average. This may be due to a higher concentration of cross-docked units that don’t require greater heights.



WHERE HAVE BUILDING HEIGHTS RISEN MOST?

Over the past decade, average warehouse heights have increased significantly in some regions, signalling a shift in market dynamics. Yorkshire and the Humber leads the trend with a 57% rise in average heights, followed by London (39%) and the South West (35%). In contrast, regions such as the East Midlands, West Midlands, Wales, the North East and South East have seen only marginal changes of 3% or less. This divergence suggests that the markets experiencing the greatest change are not necessarily those traditionally associated with large-scale logistics hubs.

CHANGING FULFILMENT AND DISTRIBUTION MODELS

Historically, centralised fulfilment facilities have clustered in the Midlands “Golden Triangle” or at major city gateways, leveraging strong transport links to maximise reach. However, rising labour pressures and the need for proximity to parcel carrier networks are pushing some operations further north. At the same time, the growth of ecommerce is driving new fulfilment models, with regional fulfilment models emerging alongside traditional hub-and-spoke networks.

Port-centric logistics and rail freight corridors are also gaining traction, driven by sustainability goals and a need for supply chain resilience. Locating distribution centres near ports or rail freight terminals can reduce road miles and support bulk shipping strategies. Several major supermarket retailers have located large distribution centres at major ports or rail freight terminals in recent

“The development of taller buildings will be closely tied to automation strategies and will continue only in locations where occupier demand and the additional costs can be justified.”

years. These trends are opening up new distribution/fulfilment locations, and this will drive up building heights in some markets.

Planning policy changes and rising land values, particularly in London, are pushing developers to build to greater heights. Conversely, regions such as Yorkshire and the Humber and the South West offer cost advantages and strategic connectivity, making them attractive alternatives to the Midlands for large-scale fulfilment.

WHAT DOES THIS MEAN FOR INVESTMENT AND LOCATION STRATEGIES?

The data highlights a more fragmented and regionally diverse logistics landscape, requiring nuanced investment decisions.

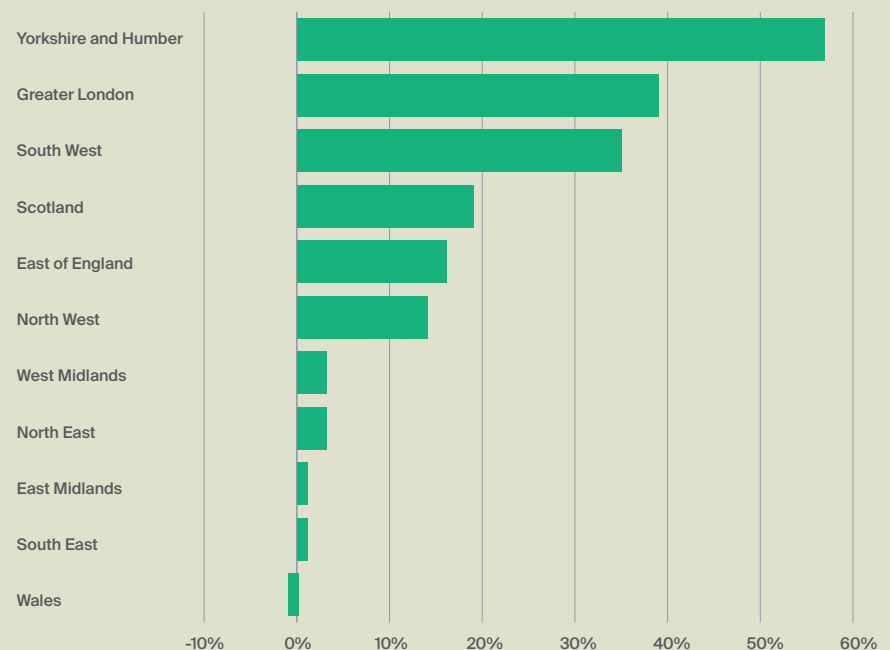
Regions with rising clear heights, such as Yorkshire and the South West, indicate growing demand for high-density, automated operations. The growth of regional fulfilment models and the shift away from exclusive reliance on mega-sites or Golden Triangle hubs are driving up building heights in other areas where markets offer strong transport links and

access to large populations. These key regional markets will continue to see demand for modern, well-specified facilities capable of supporting advanced technology and taller racking systems.

In London, high land values and planning pressures will push occupiers to maximise vertical space. However, operational considerations remain the most important factor influencing demand for height, and investors must keep this in mind. Mid-sized units may experience limited height growth due to differing operational requirements, while high costs and a restricted tenant pool warrant caution when considering multi-storey facilities.

Port-centric and rail-linked sites are becoming increasingly attractive for large-scale fulfilment and distribution as operators seek to reduce road miles and strengthen supply chain resilience. These locations will appeal to businesses prioritising efficiency and throughput, often installing significant automation to achieve this. They will require modern facilities that meet building design and height specifications, as well as sufficient power capacity.

Ten year change in average clear heights (Buildings completed since 2022 vs buildings built 2012-2015)



Source: Knight Frank Insight

Vertical value

The value of vertical space

How valuable vertical space is depends on the occupiers' ability to use this space effectively. For high bay warehouses, this often relies upon technology and automation to ensure that goods can be stored and accessed as easily on a vertical axis as on a horizontal one. For multi-storey warehouses, this means that the building configuration and the access to upper floors, work for occupiers.

CUBIC CAPACITY

Cubic capacity is a measurement of the interior volume of a structure that can be used for product storage. It is calculated by multiplying the length, width, and height of a space. For example, a 50,000-square-foot property with 36-foot clear heights has

50% more cubic space than a structure with the same footprint but only 24 feet of clearance.

CUBIC RENTS

Rents in the industrial sector are still quoted mainly on a per-square-foot basis. However, properties with high clear ceiling heights can be significantly more desirable because they allow for greater cubic storage space and thus command a higher rent.

Higher rental potential stemming from good cubic capacity leads to increased capital values. Investors value properties that can generate stable, higher cash flows, which high-specification industrial units provide. The lower vacancy rates found in

taller warehouses also support higher capital values.

This demonstrates a clear operational cost advantage for those occupiers who can, to maximise their use of a building's height and cubic capacity.

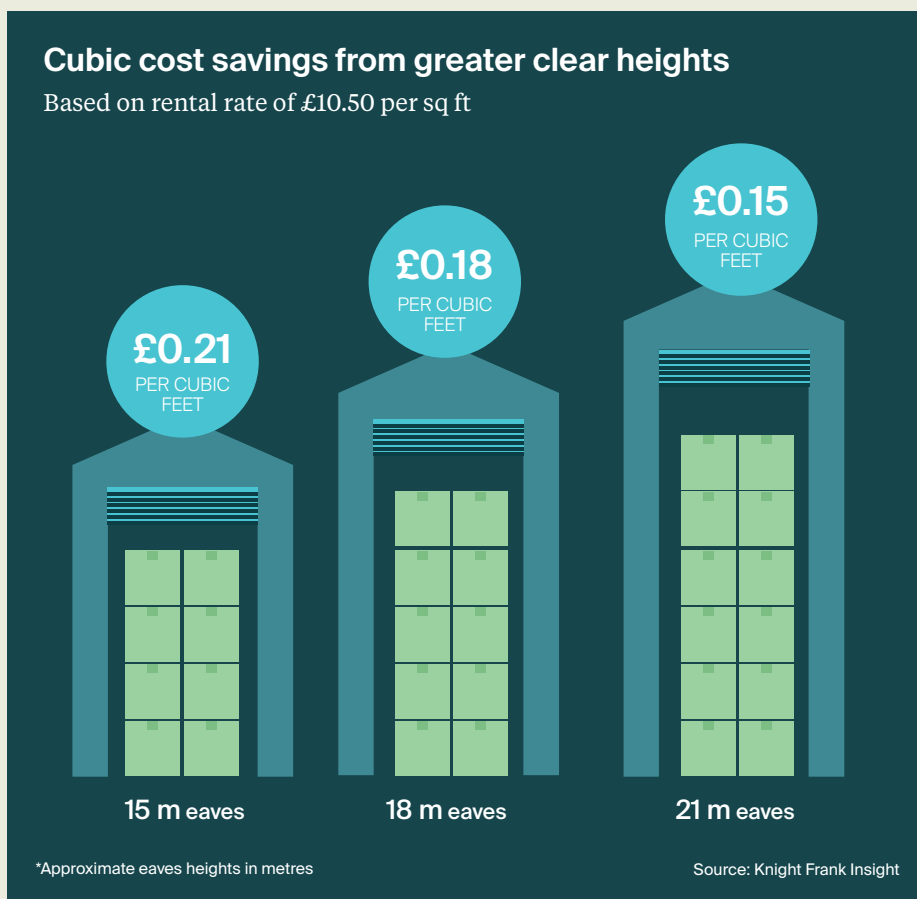
HEIGHT, RENTS AND CAPITAL VALUES

Reporting/data segmentations by building age or grade are more commonly available than by building height, and their impact on rents or asset values is better understood. Despite the importance of height from an operational perspective for many occupiers, the sector focuses on floor areas (rather than cubic volumes) as the key metric for assessing building size.

Rents tend to be higher (on a £psf basis) for smaller warehouses, with larger footprints normally offered at a discount. Across the UK, prime rents for units under 20,000 sq ft are £15.32 psf, compared with £11.94 psf for units over 50,000 sq ft (Q3 2025).

This disparity in rents is most pronounced in core urban markets. For example, in Bristol, a prime unit over 50,000 sq ft may rent for £10.50 psf, while a unit under 20,000 sq ft may rent for £17.50 psf. It should be noted that large units may not exist within the most central locations, and this difference in submarket may also impact rental tone.

However, if we account for the height difference these types of units have,



“This demonstrates a clear operational cost advantage for those occupiers who can, to maximise their use of a building's height and cubic capacity.”

“While the sq ft rent is 28.3% higher at the smaller unit, the cubic rent is 114% Height should be considered not just for short-term rent gains but as part of a broader strategy to future-proof portfolios and enhance long-term asset values.”

the disparity is even starker. A Grade A unit of between 5,000 sq ft and 20,000 sq ft would have eaves height of 6m+ (19.7ft+), while a Grade A unit over 50,000 sq ft would be 10m+ (32.8ft). Based on the average prime rents across the UK, a 5,000 sq ft unit, with an eaves height of 6 m or 19.7 ft, would have a cubic rent of £0.78 pcf, while a 50,000 sq ft unit, with an eaves height of 10 m or 32.8 ft, would have a cubic rent of £0.36 pcf. While the sq ft rent is 28.3% higher at the smaller unit, the cubic rent is 114% higher.

GROWTH IN AVERAGE SQ FT AND CB FT RENTS BY SIZE BAND

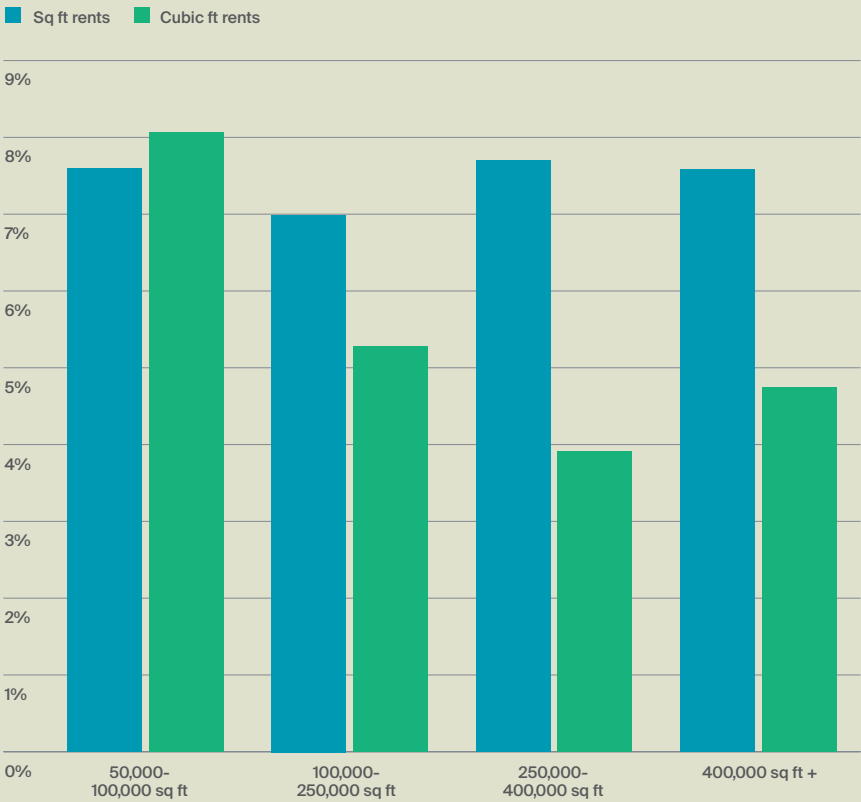
Across the top three size bands, sq ft rents have risen much faster than cubic rents. Cubic rental growth averaged just 4.6% per annum (CAGR) over the past ten years, while area rents have averaged 7.4% per annum. This compares with inflation (CPIH) of 3.4% (CAGR).

CUBIC CAPITAL VALUES

Important to recognise that the changes in average capital values will be influenced by the stock transacting – location and quality, as well as size and height.

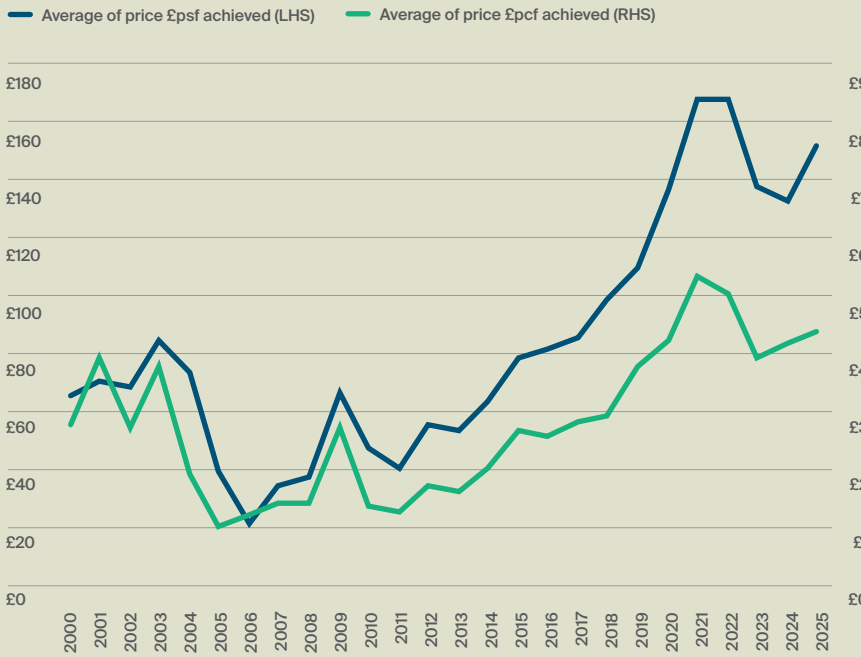
Between 2015 and 2025, the average capital value for transactions has risen 92% in £psf terms, but just 64% when measured in £pcf terms. It is worth noting that these figures will be influenced by the type of stock transacting – its location and specification will have a significant influence on values. It must also be stated that these figures represent a sample of the market (where transaction prices and heights are known) rather than all transactions.

Rising building heights have dampened rental growth when looked at in terms of volume
 Ten year CAGR for area (sq ft) and cubic rents by size band



Source: Knight Frank Insight

Average capital values over time (£psf and £pcf) - units over 50,000 sq ft



Source: Knight Frank Insight

MEASURING THE HEIGHT PREMIUM

Increasing clear heights appears to exert a measurable, but not dominant, influence on industrial rents and values. The central questions are whether we can quantify the uplift per additional foot of height and whether an “optimal” height exists.

Using a regression analysis on buildings over 100,000 sq ft, that have been rented since 2021, (where both rents and heights are known), we find that clear height explains around 10% of the variation in rents. In other words, location, unit size, specification, and timing of the deal account for the majority of rent outcomes, but height’s contribution is still meaningful.

On average, the model indicates that each additional foot of clear height adds £0.0823 per sq ft to rent, or £0.27 per each additional metre. As an illustration, increasing clear height from 30 ft (9.1 m) to 40 ft (12.2 m) implies a £0.823 per sq ft uplift.

However, this relationship is not linear, and in fact, increasing clear height from 30 ft to 40 ft would, in fact create a greater uplift in rents, of ~£1.04 psf, while increasing from 40 ft to 50 ft

clear height would see a smaller uplift of ~£0.51 psf, while an increase from 20 ft to 30 ft would see a greater uplift of ~£1.58 psf.

Of course, these are averages, and the analysis doesn’t account for variations in location and other key factors that will influence the rents and should therefore be considered a broad-brush guide or an indicator of the correct rent or best height to build to for rental returns. As discussed earlier in the report, operational considerations, locational factors, building design and cost implications, as well as planning, all factor into determining the best height and rents for a location and facility.

The analysis suggests a threshold around 54.6 ft (16.6m), above which additional height does not translate into higher rent. Current UK stock above this level is limited, and future adoption of high-bay/automation could shift the threshold upward, but today’s market evidence suggests a plateau in rental returns beyond the mid-50s (ft).

While height accounts for only around 10% of a rental value, the rental uplift from additional height is significant and understanding

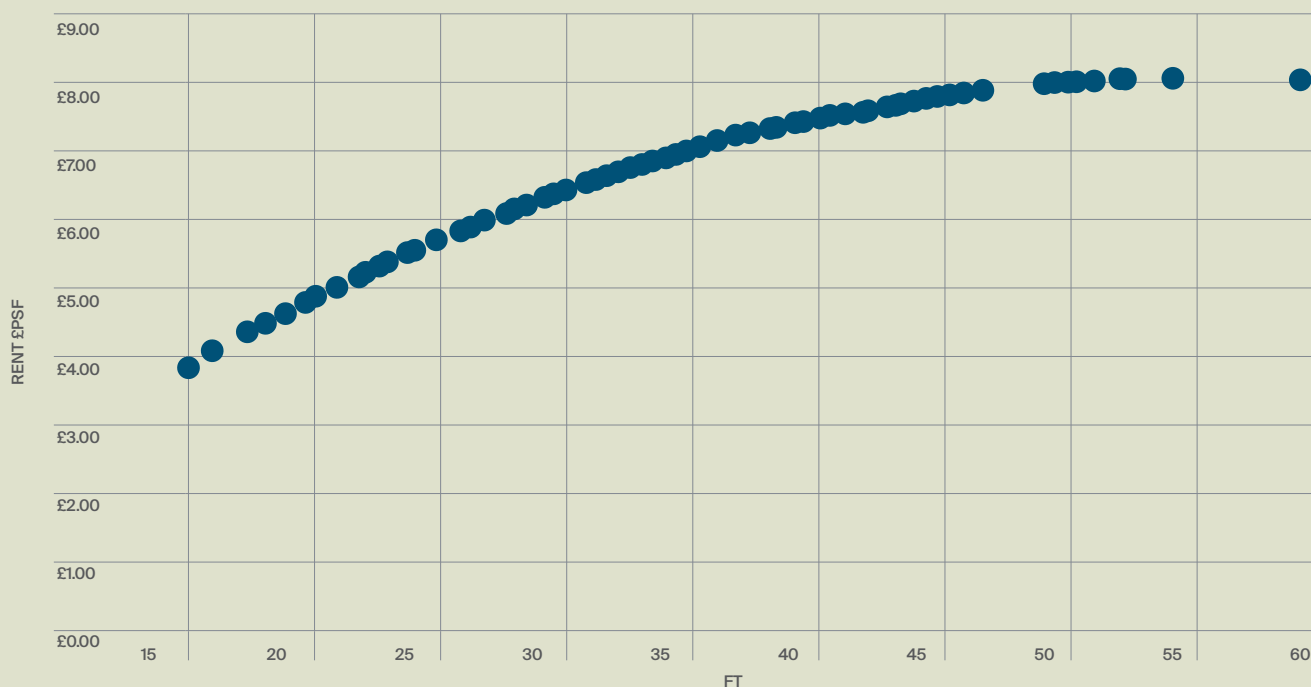
£0.0823

Each additional foot of clear height adds an average of £0.0823 per sq ft to rent. However, the relationship is not linear.

how height can impact rents is important. Part of the reason for the limited impact and the difficulty in quantifying the relationship stems from a lack of discussion or understanding around cubic rents.

However, taller, well-specified buildings offer strategic advantages that go beyond immediate income returns. Increased clear height supports automation, higher throughput and operational flexibility, which can strengthen tenant covenant and reduce obsolescence risk. For investors and developers, this means that height should be considered not just for short-term rent gains but as part of a broader strategy to future-proof portfolios and enhance long-term asset values.

Predicted average rents (£psf) based on clear heights between 15 ft - 60 ft



Source: Knight Frank Insight

Ice cubes

UK COLD STORAGE MARKET

The UK is Europe’s largest cold storage market by capacity, yet demand for temperature-controlled space continues to outpace supply. A significant share of existing stock is ageing and increasingly obsolete, creating development and investment opportunities as grocery retailers and third-party logistics providers seek to expand capacity.

Cold storage facilities are highly specialised, typically designed for two distinct environments. The first is chilled space, maintained between 0.5°C and 4.0°C, which is used for perishables such as fruit, vegetables, dairy, meat, and flowers. The second is frozen space, operating between -18°C and 0°C, for products requiring long shelf life, including frozen vegetables, meat, and seafood.

Building height and automation are becoming critical differentiators in this market. Modern high-bay

facilities, often exceeding 40 metres, maximise cubic capacity and improve energy efficiency by reducing the external surface area relative to volume. Automation technologies such as Automated Storage and Retrieval Systems (AS/RS) enable ultra-high-density storage, faster throughput, and lower labour exposure in sub-zero environments. While these features require higher upfront capital, they deliver long-term operational savings and resilience, making them a key consideration for investors seeking sustainable returns.

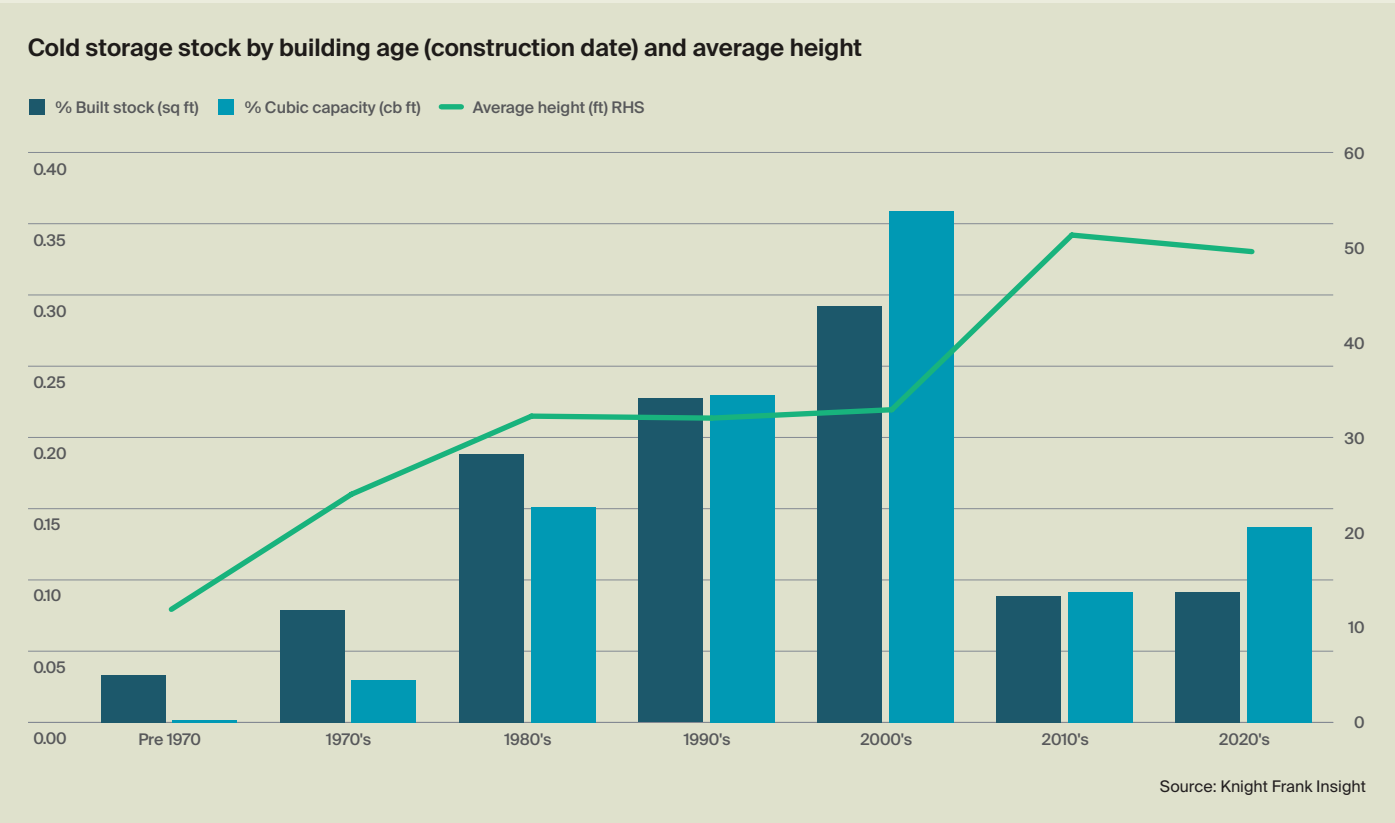
DEMAND FOR SPACE: FROZEN FOOD AND BEYOND

Cold storage demand is accelerating, fuelled by ecommerce growth, shifting consumer preferences for fresh and frozen foods, and rising pharmaceutical needs for temperature-sensitive medicines and vaccines. Expanding international

“The UK is Europe’s largest cold storage market by capacity, yet demand for temperature-controlled space continues to outpace supply. A significant share of existing stock is ageing and increasingly obsolete, creating development and investment opportunities as grocery retailers and third-party logistics providers seek to expand capacity.”

supply chains, with increasing imports of fruit, seafood, and pharmaceuticals, are adding further pressure on capacity.

The UK frozen food market has seen strong expansion, supported by inflationary pressures, convenience, and efforts to reduce food waste.



Ocado Retail reported an 18% year-on-year increase in frozen food sales, with nearly half of UK adults buying more frozen products over the past year.

These structural demand drivers highlight the need for increased capacity in the sector particularly within modern, high-efficiency cold storage facilities that can meet evolving operational and sustainability requirements.

SUPPLY CONSTRAINTS: AGEING STOCK AND REGULATORY PRESSURES

The issue of ageing stock has become increasingly important in the cold storage sector, due to recent changes in refrigerant regulations. Over half of purpose-built cold storage stock predates 2000, and only 18% of floorspace has been built since 2010.

Older facilities struggle to meet efficiency and regulatory standards, particularly following the phase-out of HCFCs and high-GWP F-gases. Transitioning from F-gases to ammonia comes with its own complexities due to its toxicity and flammability, as

well as the significant costs associated with enhancements to equipment and infrastructure to meet safety standards.

Larger operators are already expanding and future-proofing their cold storage space, undertaking CapEx to expand and modernise their facilities. For example, NewCold has recently improved and expanded their existing facilities in Corby and Wakefield. However, smaller operators will be less able to absorb the significant costs associated with bringing existing facilities in line with tightening environmental standards, leaving many legacy assets at risk of obsolescence.

COLD STORAGE FACILITIES: WHY VERTICAL SPACE MATTERS

Cold storage building heights vary significantly, but there is a strong trend toward taller facilities, with modern buildings often exceeding 30 feet (nine metres) and some automated systems reaching over 100 feet (30 metres).

Going vertical makes cold storage cheaper to run and denser to operate. Traditional warehouses (with standard

“A 40 m-high facility with a smaller footprint can reduce external surface area by approximately 46% compared to a 10 m-high equivalent, cutting refrigeration loads per pallet.”

clear heights) are not conducive to efficient refrigeration because the square footage of the roof introduces heat from solar energy, increasing the load on the refrigeration system. A smaller footprint means fewer door openings and a shorter internal travel distance for product, helping maintain temperature integrity and reducing defrost cycles/ice ingress at docks.

High-bay facilities, often automated and exceeding 40 m (131 ft) in height, deliver superior energy efficiency, throughput, and land utilisation. For example, a 40



m (131 ft)-high facility with a smaller footprint can reduce external surface area by approximately 46% compared to a 10 m (33 ft)-high equivalent, cutting refrigeration loads per pallet. Automation technologies such as AS/RS systems enable ultra-high-density storage, reducing labour exposure in sub-zero environments and improving operational efficiency.

DEVELOPMENT COSTS AND CAPEX REQUIREMENTS

Purpose built cold storage development is typically much more complex and costly than traditional warehousing. This is due to the refrigerator equipment, the building's enhanced thermal properties, heated slabs for freezer space, and foundation and floor loading considerations related to the building's height and use of vertical space.

Cold storage development costs are typically 2.5 to 3 times the cost of ambient warehouses, due to the need for specialised insulation, advanced refrigeration systems, and complex engineering for temperature control. They also require enhanced foundations and floor loading requirements due to taller heights, refrigeration equipment, and automated storage and retrieval systems.

“Operational complexity, high capex requirements, and replacement costs create a ‘sticky’ tenant base, supporting robust long-term income streams.”

While automation has become increasingly attractive, it is worth acknowledging that this technology is generally less suited to smaller facilities. To become economically viable, sites with automation need to handle 50,000 pallets or more due to the high build costs.

THE CASE FOR COLD STORAGE

UK cold storage combines strong grocery-driven demand with limited modern supply and high barriers to entry. Operational complexity, high capex requirements, and replacement costs create a ‘sticky’ tenant base, supporting robust long-term income streams. Modern, future-proofed facilities – taller, automated, and energy-efficient – can deliver sustainable returns in a niche segment of the market, where expertise and sustainability credentials underpin long-term value.

Conclusion

Height is increasingly a defining feature of logistics facilities, playing a key role in driving value and performance. Over the past decade, average clear heights for new builds have risen from 8.5 m (28 ft) in 2015 to 11.5 m (38 ft) in 2025, a 35% increase. For the largest facilities (400,000 sq ft+), heights have increased by 37%, from 12.7 m (42 ft) to 17.5 m (57 ft), reflecting the growing importance of cubic capacity in modern warehousing.

For occupiers, taller buildings – particularly when combined with automation technology – enable higher throughput and reduced operating costs. At the same time, constrained land supply and rising labour costs are putting pressure on traditional models and driving a stronger focus on making better use of vertical space to enhance operational efficiency and resilience.

Increasing clear heights from 10 m (33 ft) to 15 m (49 ft) boosts cubic capacity by 50%, reducing floorspace requirements and enabling operators to optimise land use. This is critical as land scarcity intensifies, particularly in markets where planning constraints and high values drive vertical solutions. In Yorkshire and the South West, clear heights have risen by 57% and 35% respectively, signalling a shift as more operators look beyond the Golden Triangle and adopt regional fulfilment models.

For investors, taller buildings can improve income resilience, support long-term value growth, and reduce obsolescence risk.

Cubic capacity and vertical space are reshaping the economics of the sector. Our analysis shows that each additional foot of clear height adds an average of approximately £0.08 per sq ft to rent. However, the

uplifts are most pronounced between 20 ft (6.1 m) and 40 ft (12.2 m). Vacancy data also supports the case for reduced obsolescence risk: units over 400,000 sq ft with clear heights above 40 ft (12.2 m) have a vacancy rate of 3.3%, compared with 6.6% for similar-sized units with lower heights.

The challenge lies in balancing cost, complexity, and planning restrictions against the benefits of greater heights.

Building height increasingly matters in logistics, but must be considered alongside footprint, automation strategy, and market dynamics. Those who integrate vertical thinking into their investment, development, and operational decisions will be best placed to capture the opportunities of a logistics market that is 30 ft high and rising.

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