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The sustainable future of offices

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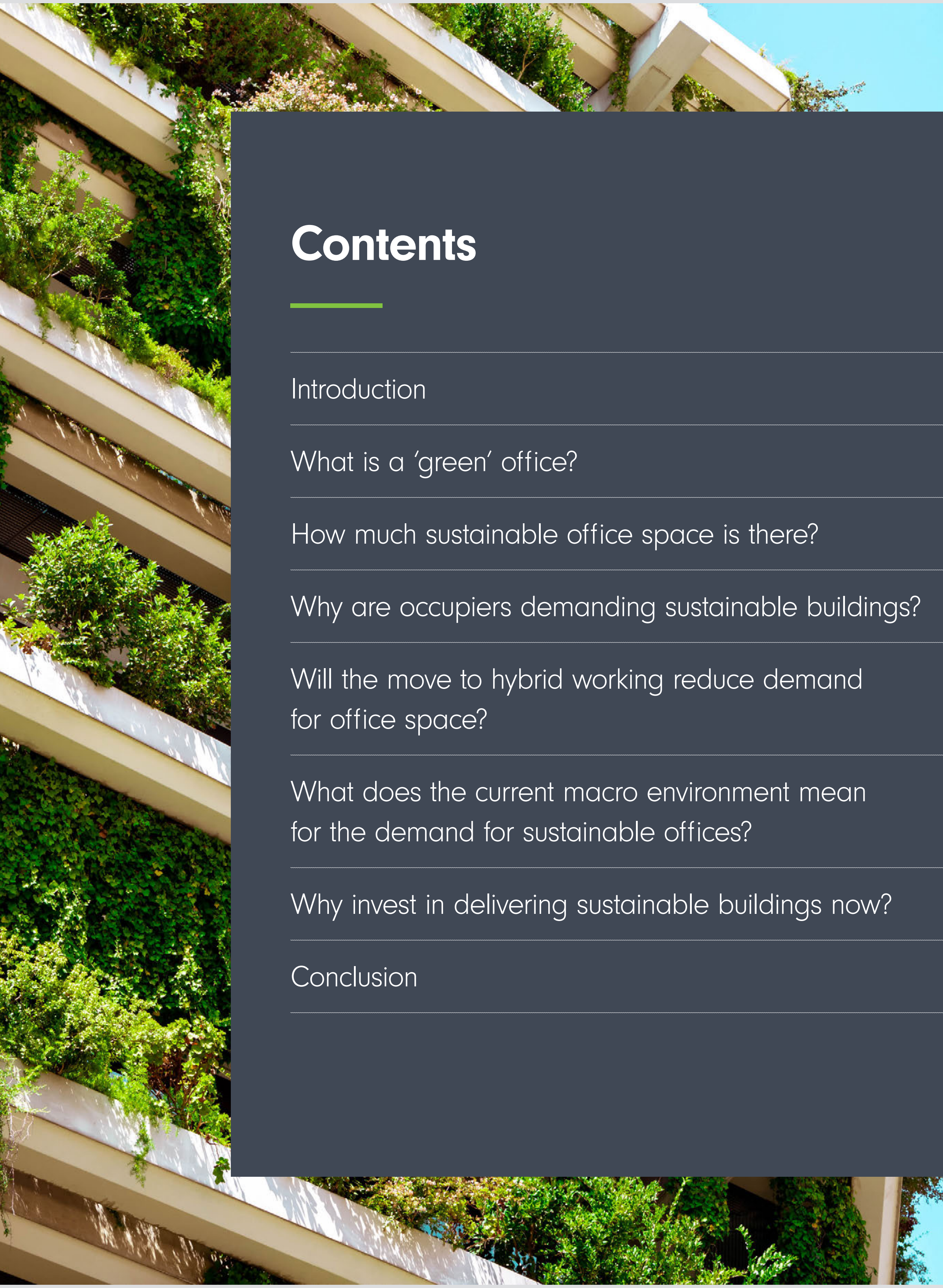

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Key takeaways

1	A mismatch between corporate NZC targets (2030-2035) and the Real Estate industry delivering NZC assets (2040+).
2	Primary cost of occupation for tenants are rent & energy costs. With a significant reduction in energy intensity, sustainable buildings will be cheaper to occupy.
3	Hybrid working and a focus on wellbeing means much of existing office stock needs to be reconfigured or risks becoming structurally obsolete.
4	An economic downturn in the event of an inflation-driven recession will provide an attractive entry point to purchase assets to be refurbished.
5	An investment strategy focused on core locations will tend to experience a smaller drawdown and recover more quickly from a potential downturn.

Introduction

Ever since the advent of COVID-19 and the mass migration of office workers from their desks in cities to their homes, there have been questions asked about the future of the office. For some, the transformation marked the end of work as we knew it, with the office becoming less relevant to our working experience, and digital tools enabling connectivity between colleagues. For others, it was simply an acceleration the trend of hybrid working, which took off when fast broadband became ubiquitous. A third contingent believes that the office remains the best place to foster a strong culture, creativity, and collaboration, and that the shift to home working would eventually reverse. All these arguments have merits, though the picture remains decidedly clouded when we try to ascertain exactly where people will choose to work in the future.

While it appears that a hybrid model is the most likely outcome, survey data shows that the quality of the office environment is important to encouraging staff to return. This, coupled with record energy costs and widespread corporate focus on their environmental credentials and net zero targets means high-quality 'green' offices are in strong demand.

What is a 'green' office?

"A 'green' building is a building that, in its design, construction or operation, reduces or eliminates negative impacts, and can create positive impacts, on our climate and natural environment. Green buildings preserve precious natural resources and improve our quality of life."

World Green Building Council[1]

At the turn of the century 'green' buildings were generally defined according to their energy efficiency and use of renewable energy sources, with a focus on ratings such as LEED in the US and EPCs in Europe. However, an exclusive focus on these credentials ignores other important factors that make a building sustainable. During the 2010s there was a growing interest in how companies' real estate portfolios could contribute towards their Corporate Social Responsibility (CSR) agenda, especially related to social impact in the surrounding area. Recently, Wellness credentials are more in focus for office occupiers, as well as factors such as air quality. Finally, rapid changes in technology such as a move to cloud-based solutions

has resulted in a growing focus on buildings' resilience to changing technological requirements, and a growing interest in measures such as WiredScore. All these factors combined make an office, in our view, truly sustainable.

How much sustainable office space is there?

The amount of sustainable office space varies from city to city based on a variety of local factors, but common to each market is the fact that truly sustainable space makes up just a small fraction of the total office market. In the markets we are focused on, we estimate sustainable offices make up as little as 5% of stock.

Truly quantifying sustainable office stock remains a challenge, mainly due to how 'sustainable' and 'green' is defined in various markets. Some analysis simply uses the presence of some form of certification to label a building as 'green'. However, simply certifying a building does not deliver ongoing impact and even a building with a good certification may not deliver the key decarbonisation requirements of occupiers. Nevertheless, anecdotally, occupiers still use certifications as a proxy for environmental credentials.

A CBRE analysis[2] of seven major European cities found that over the five years from 2016 to 2021, the proportion of buildings with any environmental certification rose from 11% to 20%. In contrast, our analysis focuses primarily on the top certifications (e.g., BREEAM Excellent or Outstanding; LEED Gold or Platinum) when estimating the stock of sustainable buildings. Our analysis of the City of London office market, possibly one of the greenest office markets in Europe, revealed that only 13.5% of office stock had achieved BREEAM Excellent or Outstanding, and a similar exercise for Amsterdam revealed only c.8% of stock was sustainable by this definition.

Figure 1: Corporate emissions targets - United States (S&P 500) and Europe (STOXX Europe 600) indices constituents

Sector	Average target emissions reduction (%)	Average target year for emissions reduction	Number of companies
Communication services	65.5	2028	63
Utilities	58.8	2030	61
Financials	53.3	2029	167
Real estate	51.5	2029	64
Consumer discretionary	50.3	2029	127
Health care	49.2	2027	120
Information technology	49.0	2027	114
Consumer staples	42.6	2028	77
Industrials	44.1	2029	194
Energy	34.9	2027	34
Materials	34.8	2028	79
Total	**48.1**	**2028**	**1100**

Source: Fidelity International, Refinitiv Eikon, June 2022.

Why are occupiers demanding sustainable buildings?

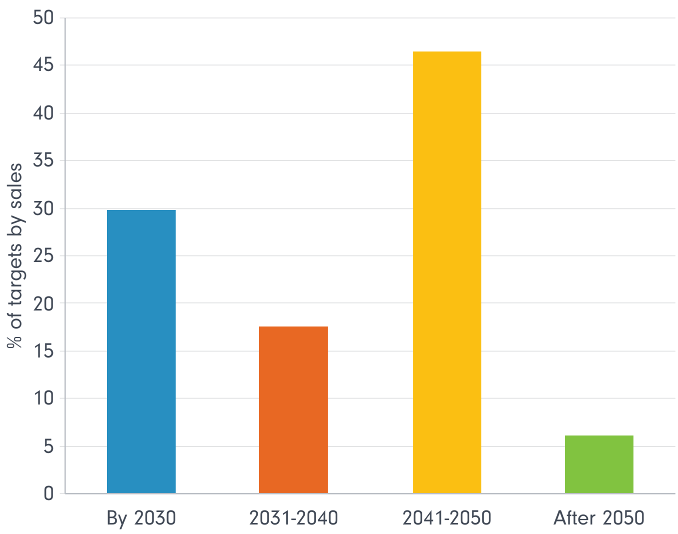
A key driver of demand for sustainable buildings comes from companies' emissions reduction targets, with the Paris Agreement on climate change in 2015 acting as the catalyst for this movement.

A Fidelity analysis of over 1000 European and US company statements indicates that companies are aiming to reduce their emissions by c.50% by Q1 2028. Whereas manufacturers and retailers will be seeking to make significant savings through improvements to processes and supply chain management, for many companies operating in the service sector their main sources of emissions are those from their buildings and from business travel. Therefore, one of the main ways for them to reduce their emissions is through taking space in 'green' offices. We believe this will have to be a key driver of demand for sustainable offices over the next five years if companies are to meet their targets.

The drivers of these ambitious targets are both 'push' factors that come from regulation and the introduction of carbon pricing, and 'pull' factors driven by the expectations of key stakeholders. In a recent survey by JLL[3], three quarters of companies said that their employees increasingly expect the workplace to have a positive impact on the environment and society. Other stakeholders such as investors and customers are also placing a greater emphasis on interacting with companies that are committed to enhancing their ESG credentials and making a positive environmental and societal impact.

Commitments to Net Zero Carbon are less universal. A survey[4] carried out in the lead up to COP26 in Glasgow in 2021 found that 417 of the 2000 largest publicly traded companies by sales had set net zero targets, and 44 companies had already achieved their targets. Where targets have been set, a sizeable contingent of these companies are seeking to achieve net zero by as soon as 2030 (see Figure 2).

Figure 2: Companies with net zero targets representing $14tn in sales. Of these:



Source: Energy & Climate Intelligence Unit, University of Oxford, March 2021.

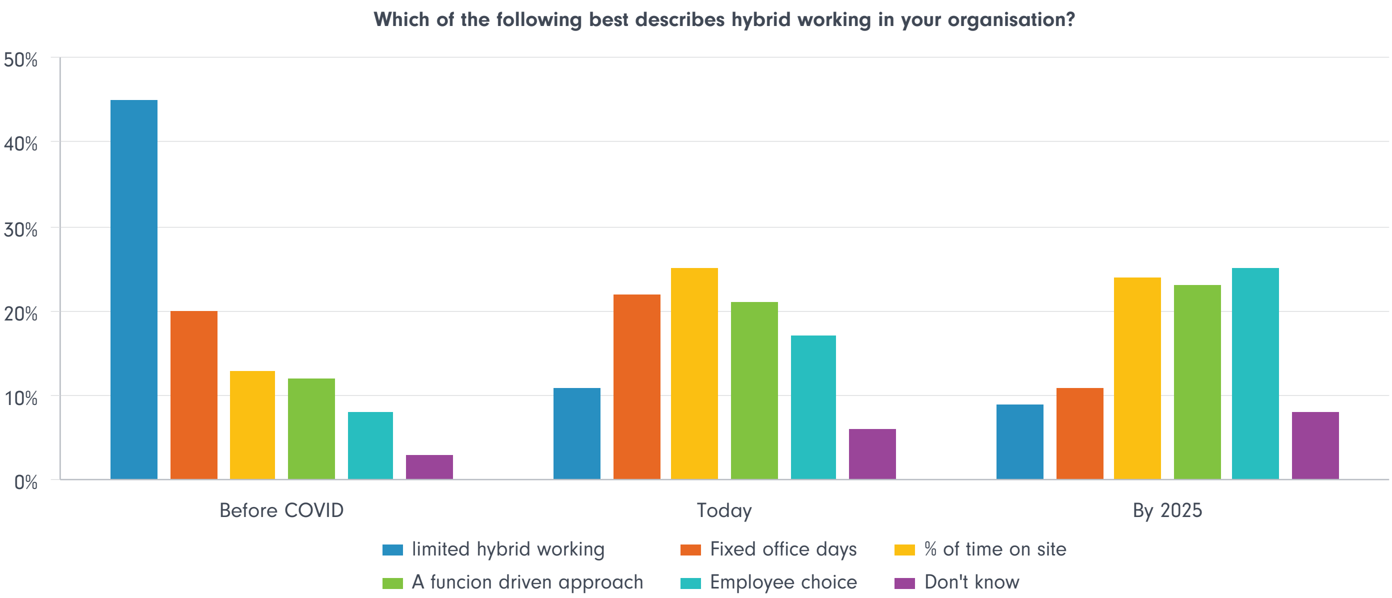
In contrast, the real estate industry has been relatively slow in reacting to corporate net zero requirements, with developers arguing that low carbon variants of key construction materials will not be available until the early 2030s. Real estate commitments to achieving net zero tend to be aiming for 2040+. This mismatch of corporate and real estate ambitions points to a need for a rapid decarbonisation of the existing building stock to deliver assets that are on an accelerated pathway to net zero to meet the demand of corporate occupiers.

The current energy crisis in Europe is driving greater occupies focus on energy costs and their contribution to total occupancy costs, and more efficient sustainable buildings can ameliorate this. The real estate industry has an opportunity by offering refurbishments that deliver a significant reduction in energy consumption, and ultimately total occupancy costs, as this is likely to be an increasingly important factor in companies' choice of office building going forward.

COVID-19 has also been a catalyst for increased demand for sustainable buildings. Surveys of occupiers[5] show that quality of space is far higher up occupiers' agendas post-COVID. Improving workforce resilience by enhancing health and wellbeing is a common priority for organisations. A key consideration is air quality, but occupiers are also more focused on other aspects of building quality that improve employee wellbeing such as green space/outdoor space, and staff amenities such as showers, cycle racks and lockers.

Furthermore, with the move to hybrid working, encouraging employees back to the office means that the office needs to offer attractions over and above the home office. Employers are keen to attract workers back to the office as they believe that in person interactions help to embed the corporate culture and improve collaboration and creativity. Recent research by JLL[6] found that 45% of companies regarded collaborative working to be a primary purpose of the office. This shift away from 'commodity' office space focused on the provision of desks will require a repurposing and redesign of the buildings, and many companies are already considering whether their current portfolios of office space are fit for purpose.

Figure 3: Hybrid working is set to become a permanent feature of most office-based organisations



Source: JLL, The Future of Work Survey, July 2022. Responses from 1095 decision makers across 13 markets.

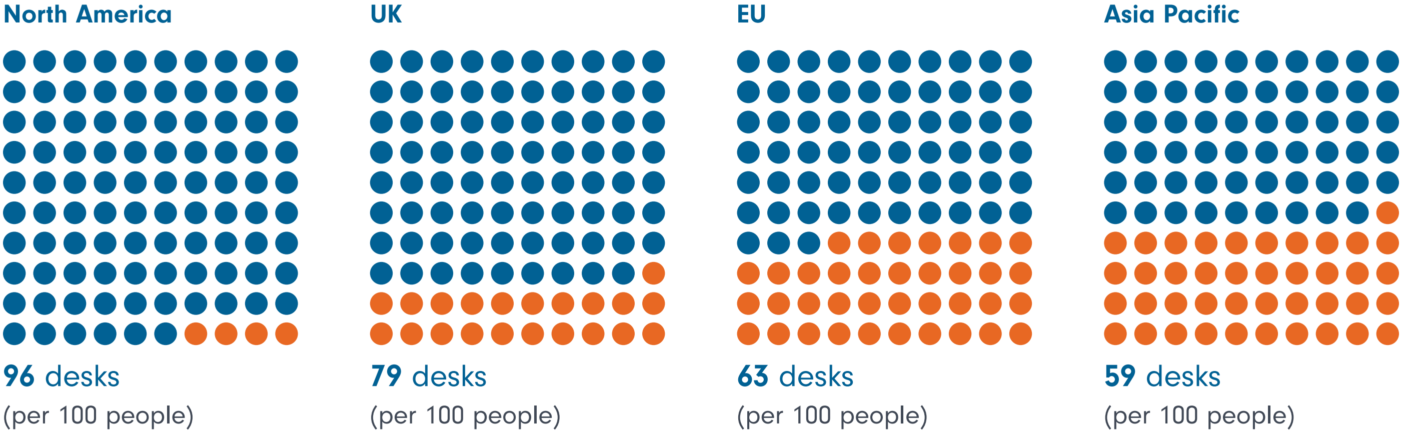
Will the move to hybrid working reduce demand for office space?

The clearest risk from COVID and the shift to a hybrid working model is the potential reduction in office occupancy levels, and therefore the reduction in office space requirements. The long-run impact of hybrid working is not clear, but it does appear that it could reduce overall demand for offices. Studies in the US have put the reduction at c.20%, but US offices have tended to operate at well over 90 desks per 100 employees, while in the EU companies tend to operate at less than 70 desks per 100 employees (see Figure 4), suggesting there is more capacity for reduction in space requirements in the US.

In Europe there has also been a more rapid return to the office. Many local factors, including suitability of housing for home working, length of commute, and corporate culture will influence the rate of return to the office. It is important to understand how these are likely to interact with local office supply when considering the long-term impact of hybrid working. Figure 5 shows that the combination of fewer desks per person and higher attendance result in greater levels of desk usage in Europe and Asia Pacific than in the US.

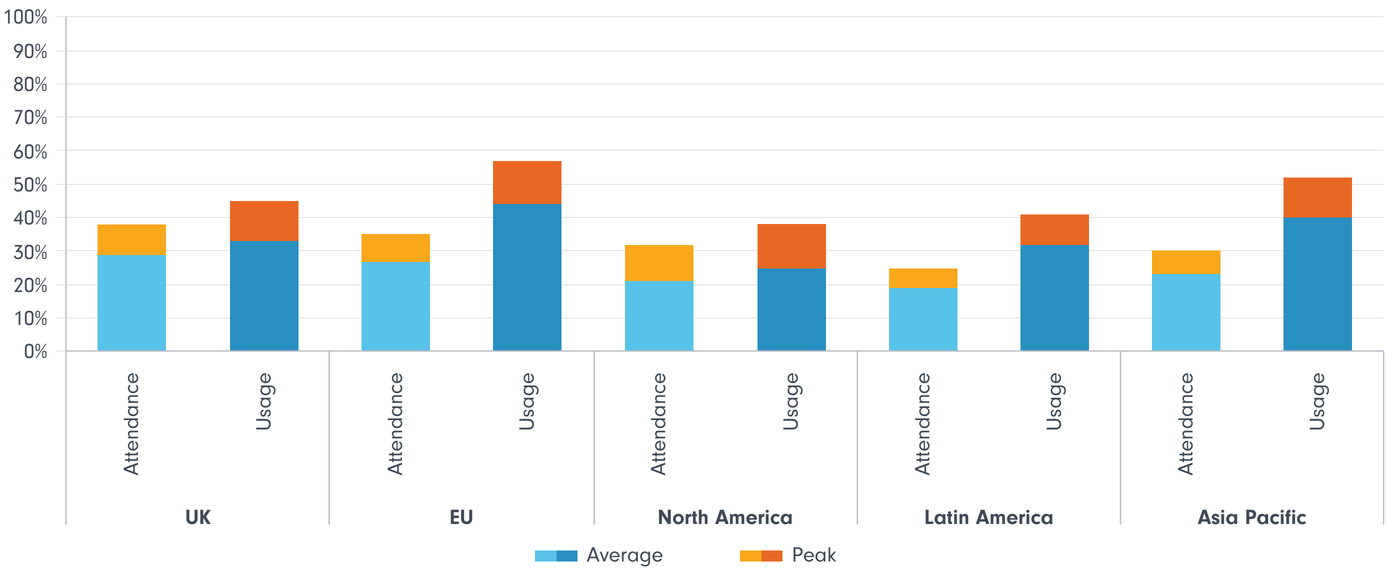
Recent survey data[7] indicate that in the near- term companies are more focused on investing in quality of space over expanding their total footprint. Not only should this encourage a return to office, the also see it as an opportunity to create strong brand differentiation and as a route to recruit and retain talent. This is understandable given the uncertainty around how a hybrid model of working will change space requirements in the long term but is also positive for buildings that offer high quality and sustainability credentials.

Figure 4: Desks per person



Source: AWA Hybrid Working Index, July 2022.

Figure 5: Levels of attendance at the office and utilisation of desks varies by region



Source: AWA Hybrid Working Survey, July 2022.

Furthermore, offices will also need to become more than simply a place where the employer provides a desk for an employee if they are to attract employees back into the office. This should result in less desk space, more space for meeting/collaboration, and more space for different styles of working. This may result in overall floorspace requirements reducing by less than expected, but space being repurposed. The risks of reduced demand are greatest in locations where there is already a high level of office vacancy and in locations that lack surrounding amenities which create attractive 'live, work, play' environments that appeal to workers. With average office vacancy rates in western Europe currently at 7.0%[8], and often much lower in CBD locations where demand is strongest, major European cities appear to be quite resilient in the face of this challenge.

What does the current macro environment mean for the demand for sustainable offices?

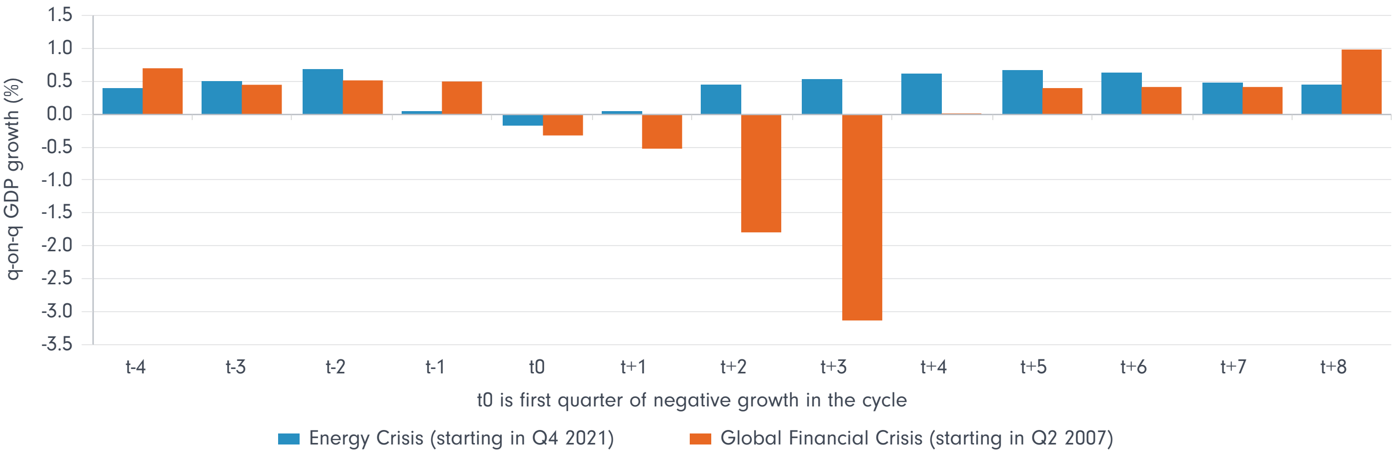
The current high-inflation, low-growth macro environment is usually regarded as the most difficult environment for real estate returns. At a market level, real estate is likely to face headwinds from weak economic growth resulting in lower demand and therefore limited upward pressure on rents, even at a time when inflation is high and construction costs are rising. Furthermore, with central banks raising interest rates aggressively to cool growth and stem the risk of high inflation becoming embedded in expectations, real estate yields are also under upward pressure as the spread between real estate yields and bond yields narrows. The implied risk premium for real estate is becoming squeezed. In such conditions, capital values are likely to fall for real estate at the broadest market level.

Historically, capital growth cycles in core European markets rarely see periods of negative capital growth that last longer than two years. The latest economic forecasts suggest that the current period of high inflation and economic weakness is going to last through 2023 (see Figure 6, but the scale of the downturn is expected to be modest. Interest rates are expected to peak by mid-2023 and then fall back to support economic growth, so we do not currently expect a cycle of the scale seen in the global financial crisis. However, we note that the downside risks to this base case, particularly from an escalation of the Ukraine Russia war, are considerable.

While the broad real estate market is likely to experience some decline in capital values, we believe that sustainable office buildings should prove to be more resilient because of more favourable supply and demand fundamentals, both from an occupier and investor perspective.

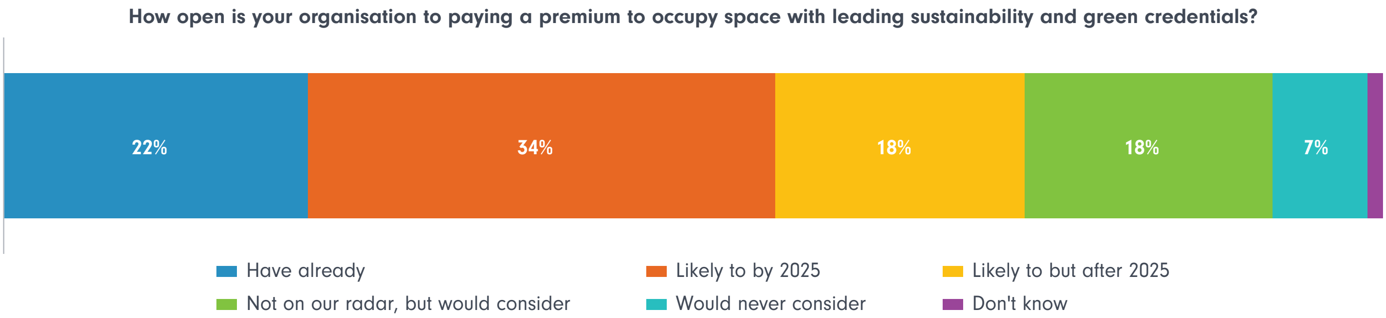
While there is limited data on vacancy or take up of sustainable buildings specifically, there is data on 'prime' or grade A buildings. These may not have all the characteristics of a 'green' building but are a good proxy for high-quality, sustainable buildings. In most major Western European cities vacancy rates for 'prime' buildings

Figure 6: Forecasts point to stagnation rather than deep recession - Eurozone GDP growth forecast comparison, GFC vs 2021 Energy Crisis



Source: Oxford Economics, August 2022.

Figure 7: Occupiers express a clear willingness to pay a 'green' premium[9]



Source: JLL, The Future of Work Survey, July 2022.

are very low (well below the 7% average level of major European cities), and while demand for office space is still at c.85% of pre-COVID levels, this demand is very focused on this 'grade A' space.

We believe that demand for sustainable buildings will continue to create a 'green premium' for rents. This is due to a combination of shortages of supply and continued demand (for all the reasons outlined above) of sustainable buildings, which will put upward pressure on asking rents irrespective of the economic environment. Companies continue to be willing to pay a premium for best-in-class sustainable buildings (see figure 7), even as economic conditions deteriorate. There is already anecdotal evidence that occupiers are choosing to trade up to quality buildings, while reducing total occupancy costs, because they are choosing to take slightly less floor space while making savings on energy usage.

From an investor perspective, given several investment houses have committed to reaching net zero carbon on Scopes 1 & 2 by 2030, there will be ongoing strong demand for buildings which are on an accelerated pathway to net zero carbon. Decarbonising entire portfolios in such a tight timeframe will be a challenge, particularly in assets where long leases are in place. Investors will therefore need to sell assets that won't meet their targets and acquire assets that do. Given that 'green' assets make a up a relatively small proportion of the investment market, we expect to see yields to remain resilient at current levels, or even to harden because of strong investor demand.

Why invest in delivering sustainable buildings now?

Despite the challenging macro environment, supply and demand fundamentals are attractive as high inflation and rising interest rates have created a clear window of opportunity. Higher interest rates have resulted in some investors with debt-based strategies pulling back from the real estate investment market. This has significantly reduced the level of competition for deals over the summer of 2022. In Q2 there was already a modest softening of yields, particularly for more secondary assets. With a high degree of uncertainty surrounding the economic outlook in Europe in the near term, pricing is likely to be under pressure, with a flight to quality resulting in a tightening of the definition of 'prime' assets, and a softening of pricing for other assets.

In the medium-term green premiums will be eroded as more of the stock of offices meets the requirements of regulators, occupiers, and investors. Some commentators are already arguing that it is less helpful to talk about green premiums, which have been a focus of the literature on 'green' buildings over the past 20 years, and the focus should now be on the "brown" discount. This reflects the risks of obsolescence and the cost of remediation to bring a building up to standards required either by regulation, end users or investors. However, given the time it will take to improve the office stock, there is still a clear period of opportunity to benefit from a green premium as occupiers and investors remain comfortable with the concept of it.

With sustainable buildings comprising, at most, 15% of total stock, supply will remain highly constrained for some time to come. Long lead times for gaining planning for new buildings should provide further confidence that supply will remain tight. The main source of supply will be through refurbishment, and not all real estate investment firms have the capability to deliver specialist refurbishments.

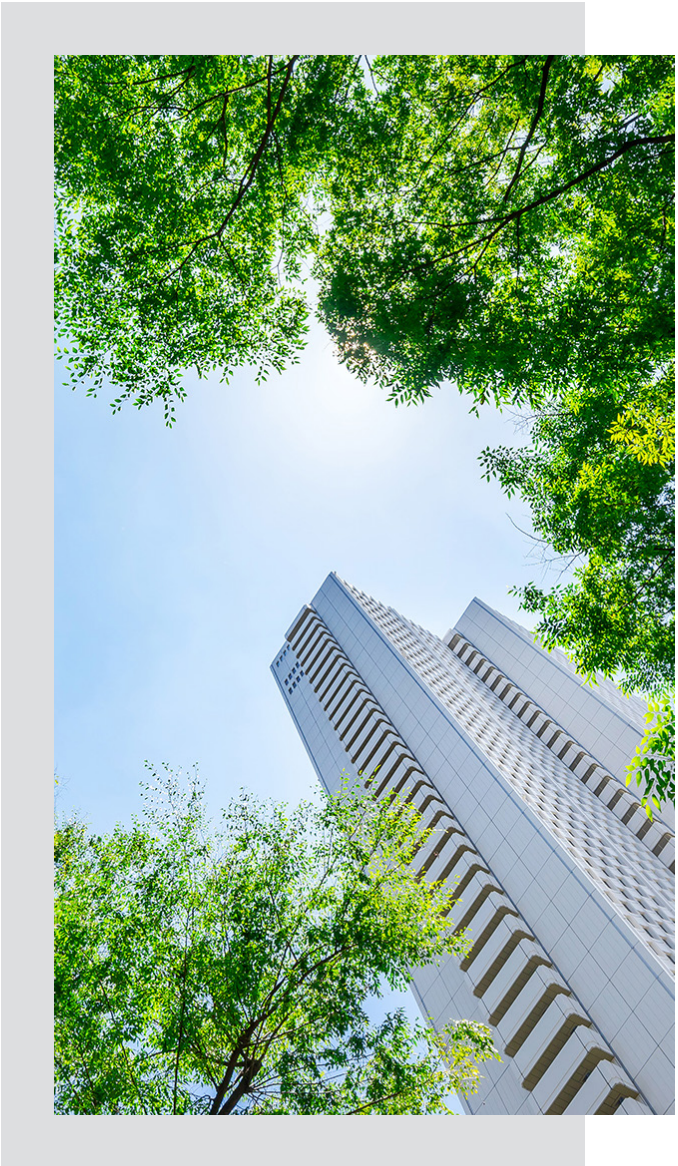
According to JLL, new completions as a percentage of current stock are forecast to average less than 2% pa over the next five years[10], and with the slowdown in economic growth, actual completions are likely to be less than expected. Refurbishments could also result in a further 0.5%-to-1% of grade A stock being delivered to the market each year. Assuming that all new development and refurbishment is carried out to BREEAM Excellent or Outstanding standards, this would only result in 'green' buildings making up c.25%-30% of all stock in five years' time. Some of this new construction and refurbishment will not be to these standards, risking the delivery of Net Zero Carbon targets.

The cost of real estate debt has increased rapidly as central banks have aggressively increased interest rates to manage current high levels of inflation, and this has resulted in a decline in investment activity from debt backed investors. However, many financial institutions are keen to build out 'green finance' and Sustainability-Linked Loans (SLLs). These loans are based on a set of agreed KPIs around sustainability performance, particularly related to the retrofitting buildings, using standards such as BREEAM excellent. As a result, debt finance remains available for strategies that deliver impact, and the cost of this financing is often as a modest discount of c10-25 bps compared to mainstream real estate debt finance.

Conclusion

A strategy focused on refurbishing existing office stock to deliver sustainable buildings on an accelerated pathway to net zero carbon should deliver attractive returns. This is underpinned by strong occupier demand for high-quality green and sustainable office space. For some, this will be driven by their own sustainability targets, which in turn are in part motivated by the expectations of shareholders, clients, and investors.

There is growing demand for the resulting refurbished product from investors in the core fund market. Core funds are increasingly aware of the risks they face from stranded assets in their portfolios and are becoming more focused on the green credentials of buildings when assessing investments suitable for a core risk profile. With strong demand in the investment sector, sustainable offices should not only maintain their values, but may even see growth in value going forward.



[1] World Green Building Council, What is a green building?, Green Building Council 2022, (accessed 7 September 2022).

[2] CBRE Research, The Value of Green Building Features, August 2022.

[3] JLL, The Future of Work Survey, July 2022. Responses from 1095 decision makers across 13 markets.

[4] Energy & Climate Intelligence Unit, University of Oxford; Taking Stock: A global assessment of net zero targets, March 2021.

[5] CBRE, EMEA Office Occupier Sentiment Survey, May 2022.

[6] JLL, The Future of Work Survey, July 2022.

[7] Microsoft, Work Trend Index, March 2022.

[8] JLL European Real Estate Forecasts, May 2022.

[9] JLL, The Future of Work Survey, July 2022. Responses from 1095 decision makers across 13 markets.

[10] JLL, European Real Estate Forecasts, May 2022.

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