

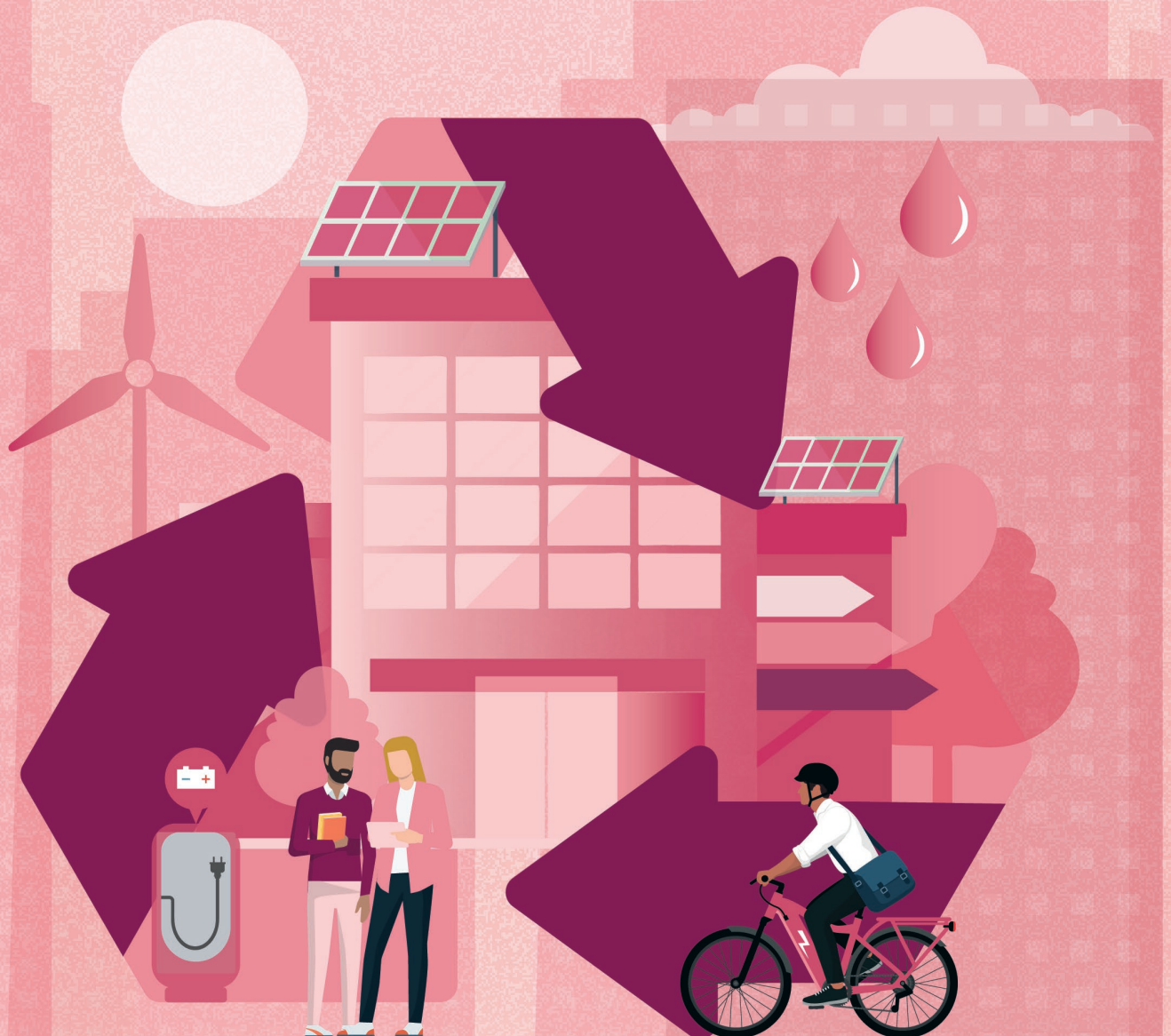
Meeting the Commercial Property Retrofit Challenge

Part 3: Future-proofing, Practicalities & Possibilities

2025

Outlining final key considerations in asset decarbonisation, around timing and market momentum, as well as highlighting sustainability considerations for all potential options, such as repurposing

knightfrank.com/research/esg



The quick take

This is the third and final part of our series: *Meeting the Commercial Retrofit Challenge*. In *Part 1 and Part 2* we covered the key questions, costs, and benefits of retrofitting and refurbishing. Now, in this final instalment, we tie it all together – adding in the final considerations and the need to act sooner rather than later and touch on the final “re”: repurposing, whether through new uses or redevelopment

KEY TAKEAWAYS

£2.8bn

value-add investment

Momentum has been and continues to build for value-add strategies, with early-mover advantages in sight. In 2024, 45% of London office investments focused on value-add opportunities, according to Knight Frank data. Across the UK, excluding London, £991m was spent on office investments for redevelopment and £915m on industrial, according to RCA. More on [page 3](#).

40%

fall in approved planning applications

Planning approvals for office refurbishments have hit a six-year low, from 500 in 2019 to under 200 in 2024, although partly explained by falling approval rates (see [page 4](#)). Beyond planning challenges, project timelines can span multiple years, and supply shortages are intensifying, creating an opportunity. London faces a 7.6 million sq ft shortfall of new and refurbished office space, and 40% of office markets outside of the capital are ‘under-supplied’ for Grade A spaces ([page 3](#)). Aligning ESG compliance with market cycles can unlock liquidity.

3 years

for comprehensive refurbishment

The timing of retrofitting, refurbishing, or repositioning projects is critical. Comprehensive refurbishment projects under 100,000 sq ft can take two to three years, with larger ones taking up to four years, as we explore on [page 5](#). Early planning is vital to maximise opportunities, while lighter-touch interventions may save time but require swift action.

£2.7bn

in annual rent to future-proof

Strategically aligning projects with lease expiries can unlock significant opportunities. With 56% of leases on offices rated EPC C or below, equating to 33m sq ft in London and 5.5 million sq ft across major cities, expiring by 2030, this is a prime chance to upgrade and secure £2.7 billion in annual office rent ([page 6](#)). Early planning could help avoid vacancies, mitigate potential rising labour costs, and ensure smoother execution ([page 7](#)).

19

percentage point value uplift

Assessing the potential investment return from retrofitting or refurbishing will play a role in determining the appropriate approach. Our analysis of London office retrofit or refurbishment projects, which improved EPC ratings from C and below to B and above, revealed that the average capital value gap relative to prime values narrowed by 19 percentage points (see [page 8](#)).

10.6m sq ft

repurposing potential for London offices

When retrofit or refurbishment isn’t viable, repurposing offers opportunities. Since 2015, 77 million sq ft of office space in England has been converted to residential use. We identify 10.6 million sq ft, or 4% of the total office space, in London, meeting specific criteria, meaning it could have repurposing potential. See [pages 12 and 14](#) for ESG and residential insights and [page 11](#) for redevelopment ESG considerations.

Window of opportunity

There is a window of opportunity to gain an early-mover advantage, with increasing investor focus, potential lengthy project timelines, and a shortage of labour to deliver. Understanding the pressures and implications from the outset is imperative for optimising performance

Growing investor focus

Investor interest in improving properties to be sustainable as well as providing amenities has steadily increased in recent years. In our 2025 ESG Property Investor Survey, 62% were looking to acquire poor ESG-performing assets with a view to improve them. London has emerged as a hub for value-add acquisitions – properties requiring capital expenditure to improve their quality for future use – rising from 11% of office transaction volumes in 2018 to 45% in 2024. This equated to some £2.8 billion in 2024.

More broadly, 6% (or £2 billion) of the volume invested in UK property outside Central London in 2023 was allocated to properties intended for renovation or redevelopment, based on RCA definitions, which are more narrow than the value-add figures above, at the time of purchase. This momentum carried over into 2024, with £2.7 billion – representing 7% of total investment. Offices topped the list with £991 million in transactions, followed by £915 million in industrial.

Yet, the focus on retrofitting and refurbishing is not confined to new acquisitions. In our ESG Property Investor survey, 73% of those holding UK assets were looking to improve the quality of their existing portfolios. However, with the constraining factors outlined in this report and uncertainty around future policy, there is a trend towards lighter-touch interventions as an interim solution. MSCI data confirms

that office improvement expenditure¹ has picked up, with the average spend per standard office asset increasing by 31.5% between 2019 and 2024 – although part of this may be attributable to the rise in build costs. At the same time, overall capital expenditure (capex)² nearly halved, reflecting a clear shift in spending priorities. Most recently, improvement costs reached 1.3% of average capital value.

Many market participants recognise the opportunity presented in this series. To benefit from the early-mover advantage, considered planning needs to be in place. While several constraining factors, such as development and finance costs, exist, it is critical to undertake reviews and begin that process at the earliest opportunity, given the rising market forces that could accelerate obsolescence presented in *Part 1*.

Timing the completion

One critical piece for viability is considering the timing. Whether choosing to retrofit, refurbish, or repurpose³ a property, the decision hinges on financial viability – a topic discussed in *Part 2* and the *UK Cities DNA series*. Beyond the refurbishment process itself, key considerations include post-completion financial metrics, the dynamics of market timing, and the appeal to the next wave of investors.

As highlighted in the UK Cities DNA series, *Oversupply or Obsolescence*, there is a supply squeeze, particularly in

London, where the expected shortfall of new and refurbished offices is 7.6 million sq ft during the next five years. This has been rising due to our expectations that the entire under-construction pipeline will be completed relatively soon, by 2028. Across regional cities, the office market reflects a mixed but increasingly supply constrained landscape. Currently, 14% of markets are classified as either undersupplied or critically undersupplied⁴, a figure that climbs to 40% for Grade A spaces.

With planning and construction timelines spanning years, relief from this supply crunch seems distant. Refurbishments are unlikely to bridge the gap, as planning applications for these projects across major UK cities⁵ have sharply declined. Glenigan’s database shows a drop in approved applications from a peak of just under 500 in 2019 to just over 300 in 2023. Figures for 2024 indicate only 194 approvals. This trend may be partly attributed to falling approval rates, which remained steady at around 90% between 2019 and 2022 but dropped to just under 80% in 2023, as well as lower application numbers.

7.6m

The expected shortfall of new and refurbished offices in London is 7.6 million sq ft during the next five years.

¹ According to MSCI, improvement expenditure refers to ongoing capital spending on properties that are not under development. This typically includes costs for minor refurbishments or upgrades.

² According to MSCI, capital expenditure refers to all expenditure that has been capitalised rather than expensed, including, but not limited to: expenditure incurred on developments, landlord improvements, refurbishment costs, restructuring leases and contribution to fit-out costs.

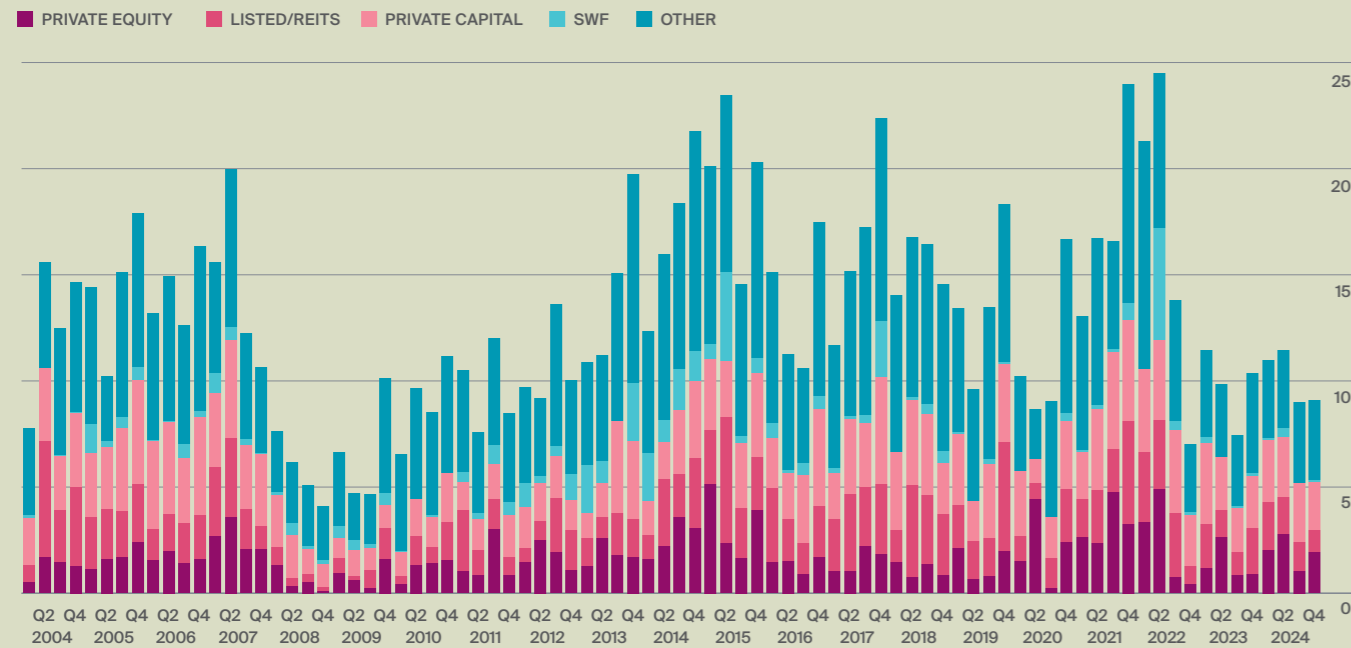
³ In this series we refer to retrofit as lighter touch intervention which may be possible to do with tenants in situ, refurbishments are more comprehensive and typically require vacant possession. Repurposing is the greatest level which either sees the building change its use or is redeveloped – i.e. demolished and rebuilt. For full definitions of these please see Part 2 of the series.

⁴ Towns and cities are categorised based on the time required for planning and construction: less than 1 year indicates a “Critically Under Supplied” status; 1–2 years signifies “Undersupplied”; 2–4 years represents “In Balance”; and over 4 years reflects an “Oversupplied” status.

⁵ Planning applications were included for the following major UK cities: London, Birmingham, Bristol, Edinburgh, Newcastle, Leeds, and Manchester.

Figure 1: Timing the upturn

UK investment volumes by buyer type, £billion



Source: Knight Frank Research, MSCI RCA

“33% of UK property investors require EU Taxonomy compliance.”

LIQUIDITY AT EXIT

As explored in *Part 1* of this series, sustainability factors can directly or indirectly influence liquidity. For example, some 33% of property investors with UK assets require EU Taxonomy compliance, according to our 2025 ESG Property Investor Survey, for renovated buildings that typically means having improved the energy efficiency by 30%. Similarly, more than half look for green building certifications. On the timing, aligning sustainability upgrades with periods of peak market activity may result in better returns and more favourable yields.

In **Figure 1**, we look at the investment levels by investor type across cycles and shocks to UK commercial real estate, Lehman’s collapse and the Global Financial Crisis,

the Brexit Referendum, COVID-19 and interest rate rises, to identify patterns of investors through cycles. Whilst the latest trough of the cycle has been pronounced, there are tentative signs of an upturn.

Historically, private capital and private equity have often been the vanguard of recovery. Their agility approach to risk and quicker decision-making capabilities position them advantageously to benefit from the current levels of thinner competition. Yet, in the latter stages of a cycle, institutional capital can be more active, with these investors typically placing more emphasis on ESG due diligence on acquisitions. For example 60% of institutional investors undertake CRREM (Carbon Risk Real Estate Metric) analysis prior to acquisition, compared to 25% of private investors, according to our latest survey.

A well-timed project launch or completion, see **page 5** for timelines, could lead to higher values due to improved asset and market liquidity and investors active at the time. Assets meeting criteria, such as EU Taxonomy compliance, green building certifications, or renewable energy

generation, may be more appealing to a broader pool of investors, especially as ‘ESG factors’ become an expectation.

PROJECT TIMELINES KEY TO DELIVERING AT THE OPTIMAL MOMENT

There is a significant opportunity as the market experiences an uptick, but comprehensive upgrades take time to complete. Retrofitting and refurbishing projects demand careful planning and execution. The timeline can vary from initial assessments and design phases to actual construction and post-project evaluations. The average duration of these projects depends on the scale, complexity and the existing condition, so seeking advice early on is essential to driving performance.

“Aligning sustainability upgrades with periods of peak market activity may result in better returns and more favourable yields.”

PLANNING AHEAD FOR RETROFITTING AND REFURBISHING

One of the first timing obstacles to more comprehensive interventions is obtaining planning approval, which can have a great level of variation depending on the complexity and location. The new Labour government has already begun overhauling planning policy to be more conducive to development, and we may see more to streamline this hurdle.

Our analysis of Glenigan data finds that Edinburgh appears to have the quickest decision process when it comes to office refurbishments, with just over 78% of its planning applications in the last six years decided within 13 weeks. The level of activity in London is the highest, with 1,792 approved applications since 2019 and an average annual approval rate of nearly 90% from 2019 to 2023. Yet, it is proportionally the fifth slowest city for approvals, with 60% of those decisions taking less than 13 weeks. Perhaps intuitively, planning timelines also lengthen with project size. Smaller projects (up to 100,000 sq ft) are approved in just over 10 weeks, while larger ones (over 100,000 sq ft) take 12 weeks or more – essentially within three months.

But there are extremes – while the median time to obtain planning permission across all cities was just under 10 weeks, the timeframes vary widely, from under a week to, in some cases, more than two years. However, planning accounts for c. 10% of the overall project timeline. Retrofit projects, as defined in *Part 2*, which are not as comprehensive, may not require planning.

STEP BY STEP

Besides planning, timing considerations are needed for pre-planning works, assessments, and implementation. Typically, the feasibility assessment alone takes around three months, followed by the design and planning stages, which can extend the timeline by up to 21 months, according to *Knight Frank Cost Consultancy* and as shown in **Figure 2**.

MARKET VIEW

Headlease constraints on sustainability improvements



Andrew Tyler
Head of London Development

Whilst sustainable workplaces provide clear benefits for both occupiers and landlords (both freeholders and long leaseholders), historic headleases can inhibit the ability to implement improvements.

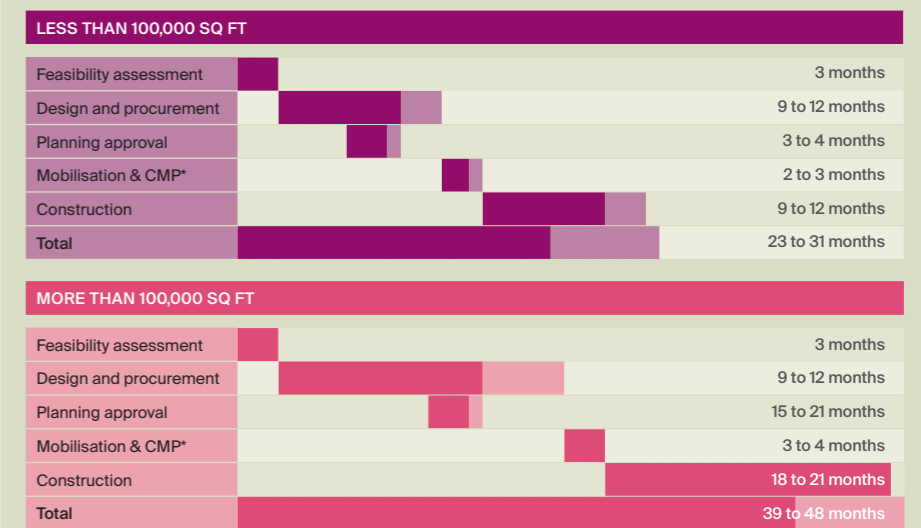
Many older headleases often predate today’s focus on energy efficiency and amenity and are therefore not structured to make changes to the building. Affected assets will need headleases restructured (or amended) to benefit both the freeholder and long leaseholder, as it is increasingly vital that appropriate and necessary refurbishments can be carried out to bring buildings up to legal and functional standards mitigating the risk of obsolescence. This could require compromise on both sides, and understanding how to navigate a solution is essential.

Then, there is the time taken to undertake the refurbishment on-site, which typically is estimated at nine to 21 months. This wide variation could reflect project size, scope, complexity, and other external factors such as resource availability. Individual assets may also be subject to headlease restrictions,

as Andrew Tyler points to which can prolong projects. When combining the full project length⁶, the more comprehensive refurbishment projects can take up to four years. Again, timelines vary with the scope of work – lighter-touch retrofits without vacant possession or planning requirements are often much shorter.

Figure 2: Timeline

Indicative timings to complete office retrofit & refurbishment projects by stage



* Construction Management Plan
Source: Knight Frank Research, Knight Frank Cost Consultancy

⁶ The full timeline covers design and procurement, planning approval, mobilisation, the Construction Management Plan (CMP), and the construction phase.

Levelling the planning playing field



Stuart Baillie
Head of Planning

New national-level guidance and legislation are needed to create a level playing field and remove some uncertainty from the planning system, enhancing project delivery. Local Planning Authorities (LPAs) generally support retrofitting, refurbishing, and repurposing due to faster delivery and lower carbon. These activities can help achieve net-zero objectives at a localised

level and support the economy through new homes or other commercial uses. Indeed, LPAs and the government recently consulted on updating planning policy regarding the demolition and redevelopment or retrofit of buildings. The outcomes of this will be keenly awaited alongside updated policy direction. It is a positive step to see this coming into the debate, as, to date, it has been a piecemeal approach across the country on retrofitting and repurposing. Without a certain level of National Policy, some LPAs won't have the capacity or resources to develop their own local-level policies, and decision-making will be inconsistent.

Permitted development (PD) opportunities have been opened up without a floorspace threshold, which means an increasing volume of office-to-residential conversions (more on this on **page 11**). Yet this may be a temporary window of opportunity, with Article 4 being increasingly applied as a block on PD Rights and the potential risk of affordable housing obligations being incorporated. Flexibility within Use Class E has allowed for changes in use and new hybrid commercial uses. We are now seeing Offices transform into Life Science and Department Stores into Leisure & Entertainment hubs without the need for a Planning 'change of use'.

Leveraging lease expirations to future-proof income

Timing is key when aligning opportunities with lease events. Over the five-years to 2023, MSCI data shows that across the UK, on average, at expiry 77% of occupiers vacate and 15% re-let. Lease expiries provide chances for extensive refurbishments or repositioning projects. They also create opportunities to collaborate with existing tenants to improve spaces and potentially retain them, as Amira Hashemi and Charlotte Owen of Property Asset Management discussed in *Part 2* of the series. Successful asset and portfolio decarbonisation strategies hinge on effectively leveraging these moments. With the original 2030 deadline for EPC B minimum looming, a large

portion of leases will be up for renewal prior to 2030. In London, over 33 million sq ft of office leases with an EPC C-rating or lower – 48% of all expirations – will be up for renewal prior to that date. For leases over 50,000 sq ft, more than 11 million sq ft are rated EPC C-rated or lower. The timing provides a prime moment to transform these spaces into compliant, sustainable assets to future-proof and protect up to £2.5 billion in potential annual rent⁷, and that is before including the opportunity for rental uplifts to improve efficiency and quality. Across seven main regional cities in England and Wales⁸, 5.5 million sq ft of office space (48% of leases) with an EPC C-rating or lower will expire by 2030, presenting an opportunity to upgrade and protect £144 million in annual rent. This brings the total potential to £2.7 billion, though this

estimate could be higher. With partial or full vacancies, refurbishment becomes less disruptive and more efficient. As mentioned in *Part 2* of this series, projects can be undertaken around tenants working with effective property managers, but they can be disruptive.

“Timing is key when aligning opportunities with lease events. Over the five-years to 2023, MSCI data shows that across the UK, on average, at expiry 77% of occupiers vacate and 15% re-let.”

Could there be a capacity gap for delivery?

In addition to potential regulatory pressures, property owners may encounter challenges in securing a skilled workforce to deliver refurbishment projects. Limited workforce availability could increase future costs. Some 440,000 new jobs could be supported, according to estimates⁹ based on the scenario outlined in *Part 2* of this series, which involves upgrading all office properties to an EPC B-rating by 2030. Assuming this is phased across five years, that is some 88,500 per annum. With just over 1 million workers

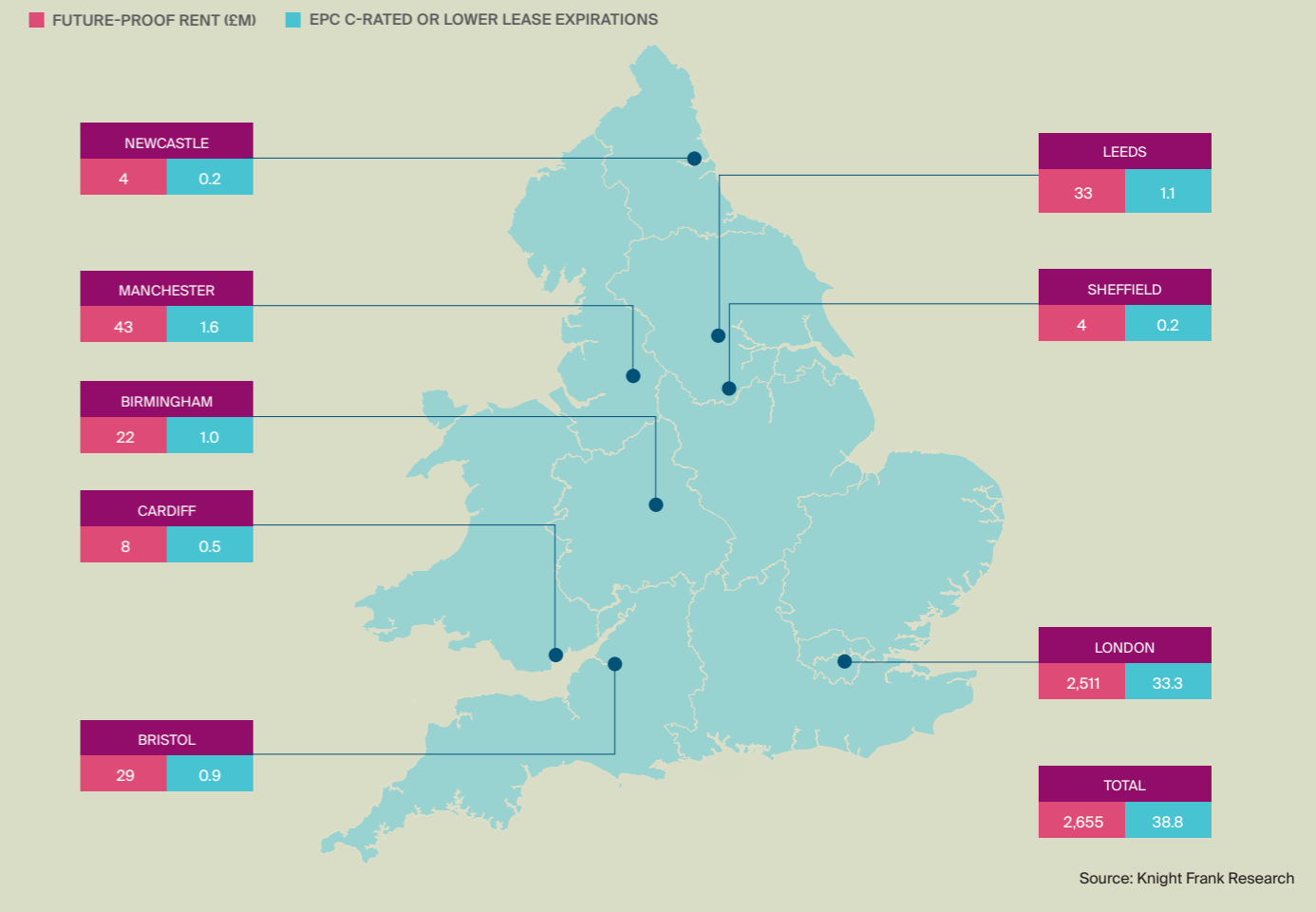
currently employed in sectors covering property-related retrofitting and some new construction¹⁰, this represents a 9% increase in demand. While this scenario is specific, it suggests a potential skills gap, as highlighted by *The Green Jobs Taskforce*. Their estimates indicate the UK will need 230,000 additional trained workers by 2030 to retrofit all buildings. With major economic opportunities at stake, government intervention is likely. Initiatives such as *Skills England* aim to address the gap by focusing on green skills development, workforce training and expanded support for apprenticeships and reskilling in construction. However, it remains uncertain whether these efforts will sufficiently close the gap and provide the skilled labour needed for large-scale delivery.

Such challenges could affect intervention costs and should be factored into project contingency planning. BCIS forecasts a 19% increase in labour costs over the next five years (or 3% annually compounded). However, if demand far exceeds supply, labour costs could rise even more sharply.

“The timing provides a prime moment to transform these spaces into compliant, sustainable assets to future-proof and protect up to £2.7 billion in potential annual rent.”

Figure 3: Vacancy as an opportunity

Annual rent that can be future-proofed and protected (£ million) and lease expirations (2024–2030) with EPC C-rating or below (million sq ft)



⁷ The rent was adjusted to account for a possible increase after the lease term ends.
⁸ The cities included are Birmingham, Bristol, Cardiff, Leeds, Newcastle, Sheffield, and Manchester

⁹ Using EPC scenarios from Part 2, we scaled for relevant floorspace, applied RICS job creation estimates, and factored in 72% additionality per BEIS guidance to generate this estimate.
¹⁰ The retrofit-relevant workforce was identified using these SIC codes: 43210, 43220, 43290, 43310, 43320, 43330, 43341, 43342, 43390, 43910, 43991, 43999, 71111, 71112, and 71122.

Value underpins everything

The value of an asset underpins every decision. In previous parts, we discussed the rationale, costs, and benefits, and on earlier pages, we covered timing. Here, we look at how sustainability factors into values and how, if the value doesn't stack up for retrofitting and refurbishing, the other 'Re' – repurposing – may be the appropriate approach

Ending the deadlock

There has been somewhat of a valuation deadlock when it comes to pricing ESG factors and obsolescence risk. In the *Emerging Trends Europe Real Estate 2025*, three-quarters of respondents still agree or strongly agree that "current valuations don't accurately reflect the current challenges facing real estate," including climate change, occupier demand and social impact. As Anna Emmison a Partner in Knight Frank Valuations team discusses, valuation is limited by market evidence, and as we are still early in the decarbonisation and sustainability supercharged obsolescence risk landscape, there have been low levels to benchmark.

This series of papers has sought to highlight where there is data and evidence on market metrics regarding ESG and sustainability in the built environment. Here, we look at the valuation impact and discuss, what contributes to that in terms of yield, as investment appraisals and, ultimately, the values at which the market transacts are increasingly sensitive to small changes in yield and discount rate calculations.

"Changes in yield reflect, among other elements, a reduction in the risk premium and potential for a long-term growth uplift from the improvements."

Value impacts

To assess how upgrades influence value, we analysed some 70 refurbished offices in London, where they have gone from an EPC C-rating or below to B-rating and above, covering approximately 4.2 million sq ft. The analysis included transaction data from before and after their refurbishment, focusing on projects completed since 2015.

The results, using the methodology as described in the box below, tell a compelling story: on average, the gap between asset capital values and prime capital values closed by 19 percentage points post improvement, with variations depending on the holding period, deal size, and location, as shown in **Figure 4**. Short-term holds (up to 5 years) outperformed, with the gap relative to prime closing by 26

percentage points, while larger deals over £100 million narrowed the gap by 24 percentage points.

This reflects the relative value uplift, but the actual uplift is likely to be different. As shown in the methodology box example, due to the relative uplift removing market growth factors over the time of refurbishment.

That change will reflect not only the reduction in required capex but also, in part, be due to a change in yield and rental expectations. Changes in yield reflect, among other elements, a reduction in the risk premium and potential for a long-term growth uplift from the improvements. For more on rental movements and cost of capex indications, see *Part 2* of the series.

As ever, the outcome depends on asset-specific credentials, timing and location, with careful consideration of economic and sustainability factors embedded into strategies.

EXPLAINER

Methodology: Relative capital value uplift

We benchmarked against Knight Frank prime capital values*, pre- and post-refurbishment to calculate the relative uplift, aiming to isolate the impact on capital values from property improvements removing market timing effects. However, locational factors, such as proximity to new transport links or green spaces, were not explicitly accounted for. We set out a hypothetical example below to illustrate.

	Market Prime Capital Value (£psf)	Asset Capital Value (£psf)	Difference
Pre-improvement transaction	2,000	1,400	-30%
Post-improvement transaction	3,000	2,670	-11%
Relative uplift			19%
Total uplift			91%

*We have used Knight Frank's definition of prime capital values for London. Our implied prime capital values are based on a hypothetical market rented office let to a high-quality tenant. Our London Series describes in detail the criteria for London prime offices, which includes a minimum floor space of 10,000 sq ft and industry-leading sustainability metrics, among other factors.

MARKET VIEW

Value underpins every decision and unlocks every initiative



Anna Emmison
Partner in
Commercial
Valuations

WHAT ARE KEY ESG CONSIDERATIONS IN VALUATIONS?

From an ESG perspective, our opinion of value is ultimately based on an asset's ability to deliver an income stream. Therefore, elements of value are driven by potential risks and the assets' subsequent ability to deliver, maintain and grow that income stream – ESG considerations are very much inherent in this and embedded within our judgements.

WHAT ESG METRICS OR FACTORS DO YOU COLLECT?

It's key to understand the "ESG profile" of an asset and its bearing on risk in the same vein as an asset's location, covenant strength and income profile when making our judgement. To ensure we are capturing all possible metrics, the Valuation & Advisory team have developed, in tandem with our ESG Consulting team, a comprehensive in-house framework to interrogate issues such as:

- Regulatory compliance (including potential MEES)
- Certifications
- Green lease clauses
- Income from renewables

Capex is also another key consideration when we approach our valuations, and it dominates a lot of our discussions. The variability and case-by-case cost requirements make arriving at an input very challenging, and where possible, we look to our clients to be open with the advice they have received.

WHAT ARE THE LIMITATIONS?

The breadth and depth of ESG make extrapolating drivers of value challenging, and we haven't yet got sufficient data to draw meaningful, quantifiable conclusions across the full ESG risk curve. In 2023, RICS penned an article discussing the risk of a carbon 'mispricing' bubble forming, and I believe we are going to hear more about this.

Valuers must follow the market, and whilst we are aware of risk components, we don't always have the transparency in the market to support it. Evidence that we do have may be created by investors who are not explicitly reflecting risk, and it is right that we then use that evidence on pricing to support valuations in a portfolio managed by a client who fully appreciates all the risk? The concern with any pricing

bubble is that we may see sudden pricing adjustments if we are not proactive in our discussions and raise this topic. But equally, if valuers try and mitigate this by attempting to predict vast and complex variables, we risk moving ahead of the market, which is also hugely problematic.

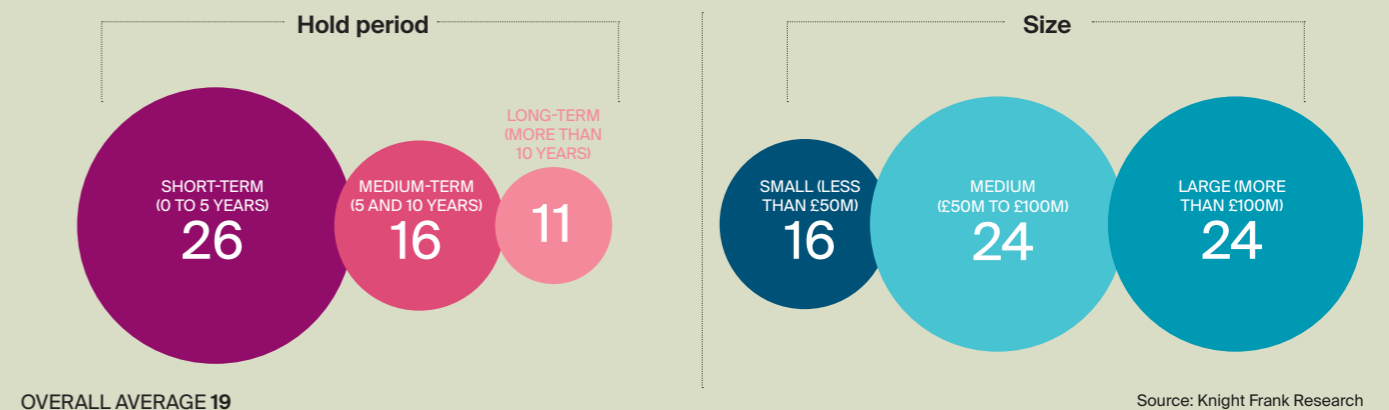
WHAT WOULD YOU LIKE TO SEE IN THE SPACE?

I would like to see more clarity and a move towards a universally accepted metric or standard of comparison. There is more instability to come in certain sectors as we enter a period of full-price discovery. This is naturally unsettling to investors, but as the market settles, some assets will become increasingly attractive to opportunistic buyers.

It is about encouraging a culture of transparency. Openness of rationale and inputs will be key. We know that the biggest driver for behavioural change across the sector is likely to come when asset pricing and liquidity reinforce the moral incentive and effectively force action or prohibit inaction. Considering how much ultimately comes down to value, valuers need to be involved in the conversation now so that we can reflect on what is being discussed and understand what's driving decision-making.

Figure 4: Enhancing value

Average capital value uplift relative to prime, by size, hold period and overall, in percentage points, for London offices improved from EPC C-rating and below to B-rating and above since 2015



Source: Knight Frank Research



MARKET VIEW

Does the DNA of your location reflect a future-proofed office destination?



Henry Wyld
Partner, Capital Markets

The supply of new buildings and substantial redevelopments, in general, has been constrained over the short term, given the rise in yields, high interest rates, global conflict, and the more elevated cost levels (as discussed in *Part 2*), which stretch or limit viability as it stands. However, the value will be driven by both rents and yields at the time of the asset coming to market, not today and having a higher-quality product – sustainable, amenity level for the occupier – will lead to a more future-proof and attractive investment. This is for a number of reasons, but two stand out – investor preferences, particularly

among institutions for assets with “good ESG credentials”, and the other is that finance is starting to favour more “ESG friendly” buildings. Much of this is driven by the occupier demand (discussed in *Part 1*) supporting rents. Location is increasingly important. A fundamental question – discussed in *UK Cities DNA: Mapping out the Repurposing Journey* – is whether the end value supports the investment needed. Does the financial equation hold? Will the long-term, stable (non-cyclical) demand in the occupational market support such a significant level of investment? Years ago, there was a multitude of office locations, but Post-COVID, that has shifted, and we are seeing consolidation with those viable office locations smaller in number. That’s not to say there won’t still be offices in other locations, but for core investors, the focus will be more concentrated. Following the trends

identified in *(Y)OUR SPACE* research, larger global corporates increasingly require a well-connected space that reflects the brand and helps attract and retain talent. Everything comes back to whether the DNA of the location reflects a future office destination or whether the asset is better positioned for another use. Those that are in a future-proof location warrant improvement, efficiency, and amenity provisions based on floor plates and occupiers relating to that location’s DNA. Yet, if the location doesn’t offer this, it’s important to consider all options for the asset and potential exit. A comprehensive repurposing may be required to protect and enhance value for the medium to longer term. Either way, as the market continues to evolve, making decisions and formulating a strategy are critical.

Exploring all options: When to repurpose?

If viability is in the question, or investment strategies are geared towards use change, asset owners may want to explore the universe of possibility and consider repurposing. From an ESG perspective, we look at key considerations below

The main driver is economic viability

There is no one-size-fits-all approach. Here, we look at the final ‘Re’ discussed in *Part 2* of repurposing, which can involve anything from reconfiguring structures for new layouts and uses to full redevelopment. Our 2025 ESG Property Investor Survey shows appetite for both existing portfolios and acquiring assets to employ these strategies. Around a quarter of those with UK assets, for example, are looking at improving their existing portfolio through repurposing.

Repurposing potential focus on homes

One potential use for repurposing that is gaining attention is converting commercial spaces into residential spaces. With a severe housing shortage and rising property values, converting commercial spaces into residential spaces is an increasingly discussed option – made easier by regulatory relaxations. The new government’s commitment to 1.5 million homes in this parliament is a testament to the political will to supply homes. For more on the Living Sectors, see *Paper Five of the UK Cities DNA* series.

DRIVING FORCES

One such government policy which has enabled more repurposing is Permitted Development (PD) rights. These, which streamline planning, saw a change in early 2024, removing

the size limit, bringing more potential assets into scope, and fuelling office-to-residential conversions. Since 2015, nearly 72 million sq ft of office space has been converted to residential in England, with two-thirds in Greater London, the South East, and East of England, reducing office stock by about 8 million sq ft (or 0.8%) annually¹¹. At the beginning of 2024, rule changes removed restrictions on building size and the three-year vacancy requirement for conversions, paving the way for this trend to grow in the coming years. Already evidenced to this point is that applications to bring forward 1,875 homes in London were received in the six months after the removal of the size limit, according to an analysis of Molior London data. That was some 58% higher than in the same period in 2019, before the pandemic, see *The London New Homes Report* for more details.

What’s the outlook for conversions across the UK? Our analysis of change-of-use planning applications (those not meeting PD requirements) shows 240 new projects in the pipeline over the next four years, set to deliver 64,000 homes across approximately 52 million sq ft, along with plans for 27 office-to-hotel conversions.

Looking ahead, we create one scenario which identifies 10.6 million sq ft in London, which may have repurposing potential. For this analysis, we have focused on buildings built before 1990, with low energy ratings (EPC D and below) and floor plates under 14,000 sq ft¹². Using the average dwelling size as before, that would be just over 13,000 homes. While this represents just 4% of London’s office space, in areas like Marylebone, West

A LOOK AT OFFICE-TO-RESI
Estimating the conversion of office space to residential use in the UK

72m sq ft

of offices converted to homes in England (2015–2023) via Permitted Development rights

0.8%

annual reduction in office space driven by office-to-residential conversions

240

new change-of-use developments (next 4 years)

10.6m sq ft

of offices in London identified as potential repurposing opportunities to residential or other uses

Source: Knight Frank Research, MHCLG, VOA

End Core, Knightsbridge/Chelsea, Soho, and Fitzrovia, suitable buildings exceed 10%. However, this is based on a blanket assumption that these buildings could be repurposed. Feasibility ultimately depends on factors such as costs and physical constraints like layout. Additionally, each building must be assessed for PD eligibility, as some Planning Authorities have Article 4 limitations in place or may seek to introduce them.

For repurposing, ESG must be embedded and considered from the outset to limit the risk of future regulation and occupier requirements.

¹¹ Calculations assumed an average dwelling size of 807 sq ft.

¹² There’s no universal formula for the perfect office-to-residential conversion, but office buildings with floor plates under 14,000 sq ft could be strong candidates. Even with a worst-case square layout–120 ft by 120 ft–you get a manageable depth of 50 ft for apartments on either side, leaving room for a 20 ft core for lifts and utilities in the centre.

MARKET VIEW

Reimagining housing



Nick Parr
Partner, Development,
Strategy & Finance

There is undeniably a housing shortage across the UK, so delivery of more homes is critical for the success of regional economies (as explained in *Paper 5 of the UK Cities DNA* piece).

Looking through the sustainability lens specifically, the delivery of homes through repurposing can support a number of strategies. Firstly, affordability pressures have been rising in both home ownership and rental accommodation due to a lack of supply. Addressing and delivering a range of housing types as well as traditional ‘for sale’ homes – student beds, co-living spaces, affordable homes, build-to-rent (BTR), and single-family residences – is crucial to support social outcomes. Not only boosting delivery but also on the “S” side by ensuring that buildings don’t become obsolete, vacant and fall into disrepair, which can have adverse local impacts.

On the “E” side, repurposing buildings means we can deliver housing tenures

with a lower embodied carbon footprint and use existing developed land rather than taking greenfield sites. In addition, they are required to be finished to modern efficiency standards, which can help bring the overall housing stock up to an improved level.

One area in particular where the commercial sector’s appetite is waning is Listed Buildings. Achieving required Energy Performance Certificate (EPC) ratings is increasingly difficult and expensive in listed buildings, making ESG compliance a significant challenge. Modern workplace demands for open-plan layouts, advanced technological infrastructure and amenity spaces are challenging to incorporate into historic structures. Moreover, the financial burden of maintaining and upgrading listed buildings often outweighs the potential returns for commercial use. Conversely, these properties *often lend themselves well to residential*. Often, the buildings were originally constructed for a residential purpose and, therefore, converted neatly back to their original use. Furthermore, these homes offer the charm of period features but with the benefits of a modern new build once completed. It’s about variety – offering character, not just square boxes.

MARKET VIEW

Is refurbishment always the cheaper route?



Sam Ley
Associate in Cost
Consultancy

Comparing the costs of refurbishment vs demolition and rebuilding is a challenge we frequently face. In most cases, refurbishment is more economical. However, there are more factors to consider, such as net-to-gross ratios. In some cases, we have

worked on schemes where rebuilding would have been more cost-effective, or at least more profitable, by increasing the net internal area (NIA), but encountered obstacles such as planning refusals—often due to the embodied carbon impact – among other reasons. There is also the complexity of current regulations that need to be adhered to when undertaking major refurbishment work, which can result in a reduction of NIA, increased costs associated with fire safety, and affordable rent conditions that may affect overall profitability. Ultimately, seeking expert advice on the practicalities and cost considerations is essential to determine the optimal asset strategy.

Redevelopment – the final consideration

Redevelopment – demolition and rebuilding – requires careful consideration of factors unique to each building and location. From the sustainability angle, there are many factors to consider, many of which we have discussed in the context of retrofitting and refurbishing, such as efficiency metrics and measures, amenity considerations and planning. Two additional factors also stand out in this debate and have garnered attention in recent cases – additional cost and embodied carbon.

WEIGHING UP THE COSTS OF NEW

As noted in *Part 2*, while new buildings have the potential to achieve prime rents, refurbished offices tend to trail slightly. However, achieving these higher rents comes with additional costs. Refurbishment costs can be tricky to predict, as every building has its own individual nuances. As described in *Part 2*, under specific scenarios, the estimates range from £113 psf for energy efficiency compliance (EPC B minimum) to £268 psf for a London office with a high level of amenity, BREEAM Excellent or Outstanding certification, and an EPC rating of A. Compare that to new builds, which Knight Frank’s Cost Consultancy estimates at £400–£600psf³, depending on amenities and sustainability certification targets.

UNPACKING EMBODIED CARBON

One of the biggest sustainability considerations for redevelopment is the whole lifecycle carbon—both operational and embodied carbon. Indeed, this is increasingly factored into any building plan. Given the embodied carbon impact, we have seen a shift in policy agendas to favour retrofit over rebuild. *AECOM* research shows that refurbishments retaining the substructure, frame, upper floors, and roof can lower carbon footprints, as these elements contribute nearly 60% of embodied emissions.

Whilst these represent an indication, embodied carbon remains largely unregulated, and measurement is not uniform. To address this gap, industry initiatives are driving behavioural change.

Local councils are increasingly guiding developers to calculate embodied carbon and set building targets. Among the early adopters, the Greater London Authority (GLA) introduced embodied carbon benchmarks and Whole Life Carbon (WLC) assessments in the 2021 New London Plan, integrating these into planning submissions. Although the benchmarks and aspirational targets outlined are specific to London, their influence is being felt across the country. However, adherence to these targets is not yet mandatory.

Other major frameworks for achieving net zero carbon—developed by the UK Green Building Council (UKGBC), the London Energy Transformation Initiative (LETI), and the Royal Institute of British Architects (RIBA)—have also established embodied carbon targets for 2030. However, these targets mainly address new construction projects and are considered stretch targets, and they aren’t fully aligned.

Table 1: Benchmarking

2030 Embodied Carbon Targets (kg CO₂e/m²)

SOURCE	TARGET
GLA WLC Benchmark	950
RIBA 2030 Climate Challenge (newly built offices)	750
Aspirational GLA WLC Benchmark	600
NZCBS Benchmark (newly built offices)	550
NZCBS Benchmark (retrofitted offices)	450
LETI Best Practice Target (newly built offices)	350

EXPLAINER

The whole life cycle of carbon

Whole Life Carbon (WLC) refers to the total carbon emissions associated with a building or project throughout its lifecycle. This includes:

- **Operational carbon:** Emissions generated during the daily use of the building, such as energy consumption for heating, cooling, and lighting.
- **Embodied carbon:** Emissions linked to the production and lifecycle of materials, including sourcing raw materials, manufacturing components, transportation, construction, ongoing maintenance, repairs, replacements, and finally, demolition and waste disposal.

Historically, operational carbon has taken the lion’s share of carbon footprint, yet with the decarbonisation of the electricity grid and increasing electrification of buildings, embodied carbon will play a larger role.



³ Costs do not include VAT, professional fees, Section 106 costs, Rights of Light agreements, Community Infrastructure Levy (CIL) payments, utility upgrades, or insurance.



A step to standardisation is the UK Net Zero Carbon Buildings Standard (NZCBS), which aims to establish clear limits and targets for achieving net-zero status. A pilot version of the standard was launched in September 2024, with the complete standard expected by late 2025. While limits on WLC are still under development, the standard already includes established benchmarks for upfront and operational carbon. However, to claim net-zero status, buildings must have 12 months of operational energy data—which is not much use for those wanting early marketing benefits.

HOW DO WE WEIGH UP CARBON?

Whilst new may have lower operational carbon – how can that be weighed with potentially higher upfront embodied carbon? Is there a time value of carbon in which it is ‘discounted’ to allow for appraisal?

Just over a quarter of the investors surveyed in our *2023 ESG Property Investor Survey* have implemented an internal/shadow carbon price to

assist in the transition to net zero. This mechanism incentivises carbon cutting by placing either a theoretical (shadow) or actual cost on emissions, allowing the comparison.

Could this also offer an option for planning ahead? The premise is that after companies set a net-zero plan, they begin to apply a carbon fee to current emissions, which can be collected and put towards ‘climate good’. For property owners, this could be a way to finance retrofits and incentivise investment, and some are already using it as a tool.

There are examples of developers and investors committing to using their internal carbon price to refurbish buildings, support investment in renewable energy and offset emissions. However, the current price range is wide. Of those who disclosed their internal carbon price, the range was from £25 to £150 per tonne, suggesting little industry consensus. Furthermore, some local authorities are introducing their own carbon tax, such as Westminster, which could be as high as £880 per tonne.

“Just over a quarter of the investors surveyed in our *2023 ESG Property Investor Survey* have implemented an internal/shadow carbon price to assist in the transition to net zero.”

MARKET VIEW

Carbon saving opportunities



Olivia McCue
Senior ESG
Consultant, Energy,
Sustainability and
Natural Resources

With the recognition that embodied carbon is playing an increasingly large role in a building’s emissions, particularly as we move towards a decarbonised energy grid, considerations around materials and re-use are entering the conversation with clients more often.

This can take the form of assessing whether to retrofit, refurbish, or rebuild from an asset owner’s perspective. For occupiers, it is a critical part of whether to stay on current premises or move to a different location.

Using a market-leading international lifecycle analysis and Environmental Product Declaration (EPD) software platform, our team has been conducting embodied carbon assessments for planned refurbishments. This includes modelling scenarios to evaluate the embodied carbon impact of different materials and identifying opportunities for carbon savings, such as using alternative materials with lower embodied carbon to replace initially proposed options.

By prioritising sustainable materials and embedding best practice circular economy principles from the design stage, a refurbishment project can substantially reduce its overall carbon impact.

From challenge to opportunity

This series has unpacked the why and what of retrofitting, refurbishing, and repurposing from the lens of sustainability, which must be overlaid with locational DNA and asset-specific requirements.

In **Part 1**, we explored the key drivers shaping the future of real estate’s future: regulatory, functional demands, and physical and financial pressures. Markets are shifting in response to increasing investor and tenant demand for efficient, sustainable, and amenity-rich spaces. Efficiency will become the new baseline, largely driven by tightening regulations and net-zero targets. However, amenity offerings and space requirements are increasingly dictated by the economic DNA of a location – it’s a unique blend of occupier needs, local market dynamics, and broader economic factors. Understanding this DNA is critical for evaluating the type, size, and specification of real estate that will thrive in each area.

Part 2 turned to the issue of viability, weighing the potential benefits against the associated costs. The upside is compelling: retrofitted or refurbished spaces can achieve significant rental uplifts, reduce void periods, and longer lease terms. Ancillary income streams, such as those from renewable energy provision, add further value while evolving financing models increasingly incentivise sustainable buildings. Yet, the benefits must be weighed against the costs to ensure viability. While we must highlight that costs are highly asset-specific, we set out specific scenarios in our analysis: the first of meeting the minimum requirement of EPC B in London through the four most common interventions would cost approximately £113 psf. Improving the property to that level and with a high level of amenities, in our specific scenario in **Part 2**, pushes this figure to £268 psf. Contingency planning from the outset and sufficient investigation are required to ensure the accuracy of these figures.

Part 3 serves to highlight the critical dimension of timing. With growing appetite for property improvements, now is a key moment to secure an early-mover advantage. As we pointed out on **page 5**, large and comprehensive refurbishment projects can take up to four years to complete, with great variation depending on the level of intervention, size, and complexity; this includes planning, design, and procurement. A project launched in January 2025 could wrap up in 2029, just a year shy of the 2030 potential deadline tied to many regulatory and sustainability benchmarks.

Market conditions at the time of project completion – not at the outset – will largely dictate viability, adding a layer of unpredictability. As highlighted on **page 3**, there is a supply shortage in many locations and nascent upswings in investment in the property market cycle. And finally, a look at value impact and the importance of assessing all routes – such as repurposing on **page 11**. Whilst there is recognition of the opportunity, the constraining factors of cost and access to finance, among others, remain. Yet, given the opportunities within this series, it is imperative to understand and plan now for when it will be.



Recent Research



Meeting the Commercial Property Retrofit Challenge Part 1



Meeting the Commercial Property Retrofit Challenge Part 2



ESG Property Investor Survey



EVs: The Everywhere Vehicle?

Keep up to speed with global property markets with our range of dedicated sector newsletters

[SIGN UP ONLINE](#)

Research



Flora Harley
Head of ESG Research
+44 20 7861 1436
flora.harley@knightfrank.com



Nicola Ryan
Senior ESG Analyst
+44 20 3967 7140
nicola.ryan@knightfrank.com



Victoria Ormond, CFA
Head of Capital Markets Research
+44 20 7861 5009
victoria.ormond@knightfrank.com

ESG Consulting



Jonathan Hale
Head of ESG Consulting
+44 20 7861 1181
jonathan.hale@knightfrank.com



Harriet Hix
Associate, ESG Consulting
+44 20 7861 5504
harriet.hix@knightfrank.com

Asset Repositioning



Henry Wyld
Partner, Capital Markets
+44 20 7861 1520
henry.wyld@knightfrank.com



Nick Parr
Partner, Development, Strategy & Finance
+44 20 7718 5224
nick.parr@knightfrank.com

Project Management, Development Consultancy & Building Surveying



Charles Ingram Evans
Head of Project Management,
Development Consultancy &
Building Surveying
+44 20 3826 0688
charles.ingramevans@knightfrank.com



Paul Prior
Cost Consultancy
+44 207 861 5108
paul.prior@knightfrank.com



Craig Frost
Project Management
+44 207 861 5108
craig.frost@knightfrank.com

Planning



Stuart Baillie
Partner, Head of Planning
+44 20 7861 1345
stuart.baillie@knightfrank.com



Anna Emmison
Partner
+44 20 3866 8045
anna.emmison@knightfrank.com

Commercial Valuations