March 2024

Buildings that go green: Making an impact while still making alpha

Research conducted by Fidelity International suggests that pursuing the most sustainable renovation strategy for an office is not only better for the environment, but could offer the best returns on invested capital.

Aymeric de Sérésin
Director, European Real Estate

Cian O'Sullivan
Senior Research Analyst, European Real Estate

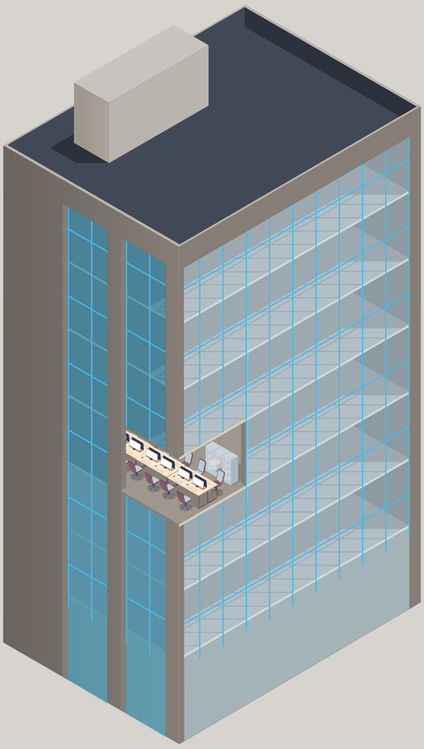
Nina Flitman
Senior Writer

"No pain, no gain" was core to Jane Fonda's approach to exercise and life – the idea that something can only be achieved by enduring hardship and through sacrifice. In the 21st century, this ascetism has fed through to our approach to sustainability: surely, if we want to help the planet and reduce our carbon footprint, we have to make sacrifices along the way, whether that's to our comfort, our convenience, or our pockets. But Fidelity International's latest research suggests that real estate investors, at least, have got this all wrong. When it comes to real estate investing, our models show that that greener choices are also better for final financial returns.

Take as an example a hypothetical commercial office building in one of Europe's main financial centres. This is not a run-down, decrepit building that requires a total overhaul to be functional, but neither is it fully fitted out with the latest green technology. For the sake of this case study, we'll price this prime-location asset at €100m.

Unrenovated building

Prime location in a leading European financial district



BREEAM rating	Primary energy demand cut by up to
Unchanged	**0%**

Estimated Rental Value	Growth in capital value
€550 per sqm/year	**0%**

Source: Fidelity International, March 2024.

If a buyer were to acquire this building, they'd have several courses of action open to them. If the building is completely functional, then one option would be simply to keep as is and not spend another cent on it. In this scenario, the office could be rented out for a maximum of €550 per square metre per year, and as nothing had been done to the building in our modelling we would expect zero growth in the capital value[1]. It's not the most attractive figure for our investor, but there are alternatives.

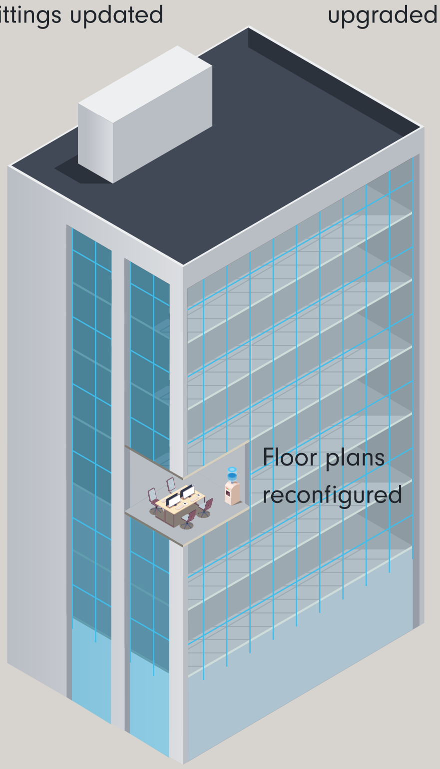
[11]There would still be some return on investment through the rental income.

More than just a lick of paint

Another option for a buyer would be a traditional value-add strategy: renovating the building to improve its look and feel. According to our model a standard renovation, where the building's fixtures and fittings are updated, could cost 20-30 per cent of the building's purchase price. The rental value would increase to around €850 per sqm/year, with a prospective sale price of €150m, suggesting a total return of 8 to 10 per cent over the holding period.

Standard renovation

A value-add strategy to improve the look and feel



BREEAM rating

Good/Very Good

Primary energy demand cut by up to

30%

Estimated Rental Value

€850
per sqm/year

Gross investment rate of return

8%-10%

Source: Fidelity International, March 2024.

This option would have green benefits too. Even just a basic update, which might include replacing old-fashioned florescent lighting with LED alternatives, could reduce primary energy demand[2] by nearly a third. A traditionally renovated building could achieve an energy performance certificate (EPC) rating of B or C, with a BREEAM rating[3] of Good or Very Good.

But if a buyer's sustainability ambitions stretch beyond this, then an ESG-focused renovation may be of interest. These aim to sharpen the green credentials of a property by upgrading flooring using recycled materials, or enhancing its insulation. Primary energy demand is cut by a third again, but BREEAM ratings are Very Good or Excellent, and the buildings achieve an EPC rating of A or B.

All of these changes would, of course, cost more[4]. We estimate a figure of 30-40 percent of the purchase price for such a redevelopment. The project would take longer too, pushing up the working capital requirements[5]. However, higher costs can be balanced out by higher returns because, put simply, green buildings lease faster, achieve higher rents, and sell for more than non-green buildings[6].

As companies commit to green strategies, they increasingly want to rent sustainable offices that match their stated ESG ambitions. The largest occupiers across six European cities anticipate they will need around 3.9m sqm of green office space by 2030, but according to the current pipeline, only around 1.7m sqm is likely to be delivered[7].

In London, around 40 per cent of new leases signed in 2023 were for the most energy efficient properties - those with an EPC rating of A and B - up from 20 per cent in 2018[8]. Tenants are also willing to commit to longer leases if their building has an impressive sustainability profile, with those well-rated properties securing contracts that are around three years longer than their less-sustainable counterparts[9].

The largest occupiers across six European cities anticipate they will need around 3.9m sqm of green office space by 2030, but according to the current pipeline only around 1.7m sqm is likely to be delivered.

Research suggests this shortfall in the supply of sustainable buildings means that any green assets will be able to charge a rental premium of around 6 per cent[10]. We anticipate that if the building in our case study underwent a full green renovation it could fetch an even greater rental premium of 7.5 per cent (with a rent of €915 per sqm/year) and be sold for around €170m - equivalent to a total return of 12 to 14 per cent.

---

[2]Primary energy means energy from renewable and non-reneable sources that meets the energy demand associated with a typical use of a building, which includes, inter alia, energy used for heating, cooling, ventilation, hot water, and lighting.
[3]Building Research Establishment Environmental Assessment Method.
[4]The average marginal cost to build green is 6.5 per cent. Additional expenditure required mostly in design costs, finishes and fittings. Chegut, Eichholtz & Kok, 2019.
[5]Green construction projects take 11 per cent longer to complete. Chegut, Eichholtz & Kok, 2019.
[6]Andrea Chegut, et al., 2014; Alexander Reichardt, et al., 2012; Franz Fuerst, et al. 2009; Wiley Benefield, et al., 2010; Erin A, Hopkins, 2016; Stefanie Lena Heinzle, et al., 2012; Prashant Das, et al, 2013; Franz Fuerst, et al, 2015, Maya Papinaeu, 2017. Measuring the Mythical, AVIVA, July 2021.
[7]Top 100 largest occupiers estimate demand requirements and current green supply pipeline. Covering six European cities: Berlin, Frankfurt, Hamburg, Munich, London, and Paris. Source: JLL Research, September 2023.
[8]Fidelity International, Knight Frank Research, DLUHC, June 2023.
[9]Fidelity International, Knight Frank Research, DLUHC, June 2023.
[10]Dalton, Ben and Franz Fuerst, "The 'green value' proposition in real estate", 2018.

It's worth noting that while the rent on an eco-building is far higher, this can be mitigated by cheaper energy costs, and potentially much improved amenity value compared with brown buildings.

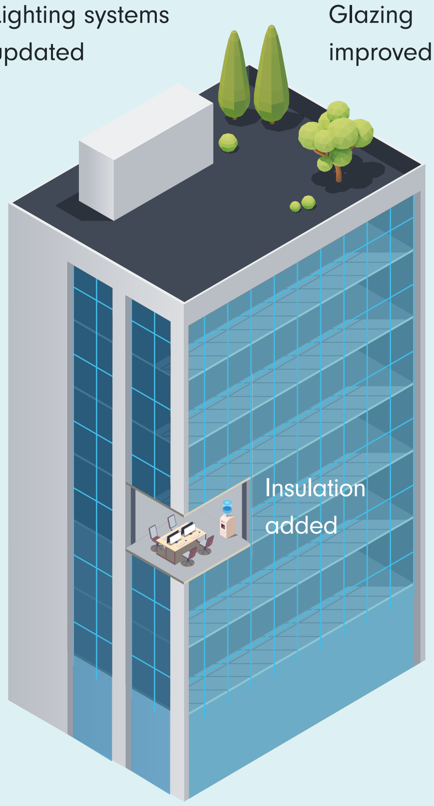
For a tenant choosing between expensive rent in a green building, or cheaper rents in a brown building, time and again we have seen occupiers chose the green building because all-in costs can be lower and because it's likely to fit with their sustainability policies.

But for the investor there are other benefits to undertaking a green renovation. Although capex is higher for this sort of process, a buyer would be able to borrow money at preferential rates under banks' green loan strategies, and with better terms too[11].

[11]Debt cost would be 24 to 29 basis points lower than for conventional renovation. Eichholtz, Holtermans, Kok & Yönder, 2019.

ESG-focused renovation

Updated to improve the building's sustainability



BREEAM rating	Primary energy demand cut by up to
Very Good/Excellent	**30%+**

Estimated Rental Value	Gross investment rate of return
€915 per sqm/year	**12%-14%**

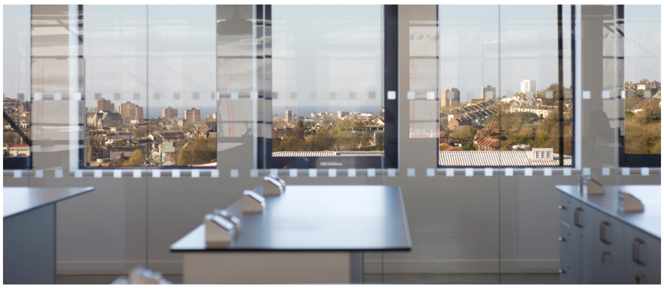
Source: Fidelity International, March 2024.

Making an impact

Our model illustrates that a building that's undergone a green renovation can offer investors both financial returns and vastly improved sustainability credentials. But what if we go one step further? What if when retrofitting a building more capex is deployed for a more rigorous, more ambitious renovation focused on impact. Are returns improved still further?

This option would transform our case study so that the building is capable of operating at net-zero carbon. There would be renewable energy production on site, such as photovoltaic panels on the roof, while heat pumps would take natural gas usage to zero. All of the mechanical equipment would be replaced, insulation improved, even water usage would be optimised, for example by installing rain harvesting systems.

All of this would cut primary energy demand by 50 per cent or more, the building's EPC rating could be A, and the BREEAM rating could reach Excellent or even Outstanding.



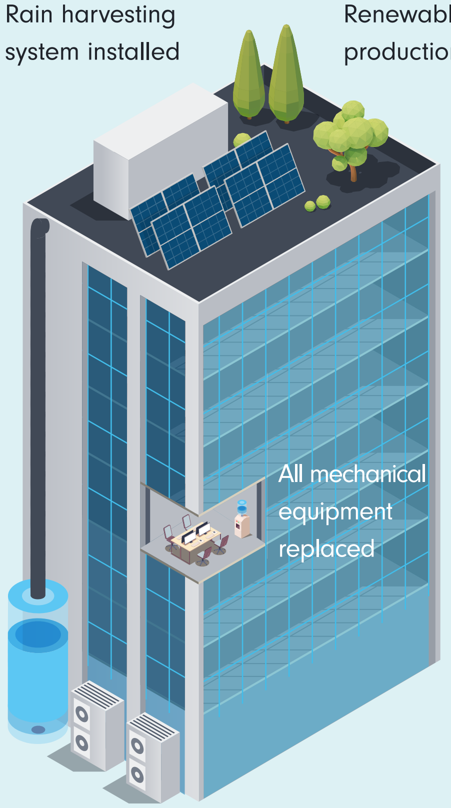
Yes, this strategy would cost more – capex would increase to 40-50 per cent of the purchase price, on top of the €100m needed to buy the building and it would take longer to implement these changes. But again, this impact strategy meets or goes beyond the requirements of banks' green loan frameworks, so preferential financing terms would be available[12].

Most importantly, this option would futureproof the building. An impact-led renovation would bring the asset in line with the 2050 targets of the Paris Climate Agreement and the risk of it becoming 'stranded' by regulatory developments over the next 25 years would be all but eliminated. The buyer would also know that on exiting their holding the building would be fully compatible with all the requirements of an SFDR Article 9 Real Estate Fund, and so may be willing to pay a premium to secure net zero-capable properties.

[12]Debt cost would be 24 to 29 basis points lower than for conventional renovation. Eichholtz, Holtermans, Kok & Yönder, 2019.

Impact-led Renovation

Net zero capable aligned with 2050 targets of Paris Agreement



BREEAM rating

Excellent/Outstanding

Primary energy demand cut by up to

50%+

Estimated Rental Value

€975
per sqm/year

Gross investment rate of return

15%-18%

Source: Fidelity International, March 2024.

So, is a retrofit on this scale worth it? We would expect a €190m sale price of the impact-renovated case study - an increase of 27 per cent over its standard value-add renovation - suggesting a total internal rate of return of 15 to 18 per cent. Again, demand from tenants would be higher, with rental values increasing by an estimated 15 per cent over a standard renovation to €975 per sqm/year.

Demand for top-rated assets is so strong that green real estate enjoys a relatively liquid market - especially in downturns - and has a more stable occupancy rate[13], so this retrofitted-for-impact asset is likely to be sold and rented out quickly, accelerating the business plan for the building while boosting returns.

[13]Brounen, Kok, 2013.

The impact of green investments on financial returns

Sustainable renovations cost more, but deliver higher rents, higher values, and lower cost of capital

	Non-renovated building	Post standard renovation	Post ESG renovation	Post impact-led renovation
Purchase Price	€100M	€100M	€100M	€100M
Capex (% of purchase price)	0	20% to 30%	30% to 40%	40% to 50%
Targeted BREEAM Rating	N/A	Good/Very Good	Very Good/Excellent	Excellent/Outstanding
Targeted EPC Rating	N/A	B/C	A/B	A
Targeted PED Reduction	N/A	0 to 30%	30%+	50%+
ERV	Max. €550/sqm/year	€850/sqm/year	€915/sqm/year	€975/sqm/year
Leverage	No debt available	40%	50%	50%
Impact on all-in Debt Cost	No debt available	N/A	-50 basis points	-50 basis points
Exit Price	€100M	€150M	€170M	€190M
Gross IRR	N/A	8%-10%	12%-14%	16%-18%

The IRR figures above are simulated performances, which are not reliable indicators of future performance. Actual returns are likely to vary. The value of investments can go down as well as up and investors may get back less than they invest. Source: Fidelity International analysis of past, current, and forecast pricing of pipeline assets at June 6, 2023. For illustration only.

Importantly, all of the options above only require renovating the building, not knocking it down to start again. Because of the carbon that's embodied in building materials such as concrete, glass, and steel, the act of demolishing and rebuilding a property can release huge amounts of carbon dioxide. Renovating an existing asset creates 60 per cent less embodied carbon than building something new[14].

Retrofitting assets is now accepted as the most effective strategy to reduce real estate's carbon footprint. It is also essential. Just over 80 per cent of existing commercial real estate stock in the European Union needs to undergo climate-driven renovation[15], but each year only 1 per cent of buildings in the region is renovated to become energy efficient[16].

The imperative to change does not mean investors have to surrender returns to contribute to net-zero aims. As our research shows, there is a gap in the market to upgrade buildings so they have less impact on the planet while at the same time generate real growth to bottom lines. The strategy does require more time and more initial expenditure, but the outlays are more than compensated in the long run. Jane Fonda was wrong – you can make gains without the pain.

[14]'The carbon and business case for choosing refurbishment over new build', Aecom.
[15]'Energy efficiency of the building stock in the EU', RICS, July 2020.
[16]International Energy Agency, December 2020.

Important Information

Fidelity INTERNATIONAL