

What is needed for the built environment to succeed?

2. [Sustainability in Building Construction – A Multilevel Approach – IOPscience](#)
3. Guin, Benjamin and Korhonen, Perttu, Does Energy Efficiency Predict Mortgage Performance? (January 31, 2020). Bank of England Working Paper No. 852 (2020), Available at SSRN: <https://ssrn.com/abstract=3532373> or <http://dx.doi.org/10.2139/ssrn.3532373>
4. [Energy efficient Mortgages Action Plan \(EeMAP\), Energy Efficient Mortgages Initiative](#)
5. [Health & Wellbeing Framework – World Green Building Council \(worldgbc.org\)](#)
6. [What You Need to Know about Impact Investing | The GIIN](#)
7. [The Role of Financial Services in Society | World Economic Forum \(weforum.org\)](#)

Climate change, resource depletion and impacts on people and nature are global megatrends that the built environment must address. In response to these megatrends, the built environment has focused on four strategic imperatives: climate action, resource efficiency & circularity, health & wellbeing, and ecological stewardship & biodiversity. Issues related to these, such as resilience, biodiversity and nature loss, and a stronger focus on social impacts, are rising in importance.

Climate Action: Sustainable finance in the real estate sector is a necessary tool for climate action. Put simply, green building requires capital to design, build, and operate better, more sustainable places. By developing and investing in green buildings and sustainable infrastructure, the sector can significantly reduce its carbon footprint for both operational emissions and upfront carbon emissions. The integration of sustainability assessments into real estate decision-making processes can lead to more environmentally friendly construction practices where embodied or upfront carbon is reduced.² Furthermore, green mortgages and energy-efficient loans can incentivise homeowners and developers to invest in low-carbon technologies and renewable energy systems, contributing to the global effort to combat climate change.^{3,4}

Health & Wellbeing: Sustainable finance in the real estate sector can yield significant health benefits. Investments in green buildings can improve indoor air quality, reduce noise pollution, and promote healthier lifestyles, thereby contributing to public health. The World Green Building Council reports that green buildings can improve occupant health and wellbeing, leading to productivity benefits for businesses.⁵ Moreover, sustainable finance can support the development of health facilities and services within real estate developments, contributing to health equity and resilience. Lastly, sustainable finance in the real estate sector can contribute to social equity and wellbeing. By investing in affordable and inclusive housing, the sector can address social inequalities. The Global Impact Investing Network highlights the potential of impact investing in real estate to generate measurable social and environmental impact alongside a financial return.⁶ Furthermore, by considering ESG factors, investors can support real estate developments that promote community engagement, fair labour practices, and inclusive environments, thereby contributing to societal wellbeing.⁷

8. [Circularity Accelerator – World Green Building Council \(worldgbc.org\)](#)
9. [Financing the Circular Economy | Ellen MacArthur Foundation \(thirdlight.com\)](#)

Resources & Circularity: The real estate sector can also contribute to addressing resource depletion through sustainable finance. By prioritising investments in buildings that incorporate circular economy principles, such as the use of recycled materials and waste reduction strategies, the sector can significantly reduce material usage and tangentially reduce the environmental and social impacts of resource extraction and manufacture in supply chains. Efforts are already in place to create environmental performance indicators in real estate,⁸ which can guide the industry towards more sustainable resource use and build a more circular supply chain.⁹

Ecological Stewardship & Biodiversity: The real estate sector increasingly recognises its contributions to ecological stewardship and biodiversity. Over half of the global economy depends on nature. As we see our urban landscapes grow, the built environment is directly and indirectly impacting habitat, ecosystems, species and water quality and availability. This is happening through consumption, fragmentation and replacement of natural cover with impermeable surfaces. The built environment has a critical role to play in supporting the regeneration of nature through direct development but also through its supply chain.

Below.

University of Pennsylvania,
Gutmann College House
| LEED Silver | LEED BD+C:
New Construction |
Photo: © Jeffrey Totaro



2.1

The opportunity in numbers

10. [Buildings – Energy System – IEA](#). Accessed May 2024

11. Referred to as [Local Law 97](#)

12. From 2022, retrofitted buildings must be 40% more energy-efficient versus 2005 post-renovation levels post-renovation in Singapore.

2.1.1 The need

Buildings account for over 30% of global energy use and more than a quarter of emissions.¹⁰ The technology to decarbonise the built environment exists, but we must scale and accelerate its adoption to ease the path for other sectors.

Today, top projects achieve near net-zero performance across various property types. Advanced design and delivery processes enable these projects to be cost-effective. For instance, BREEAM-certified The Edge in Amsterdam, Green Star-rated Heritage Lanes in Brisbane, Green Mark-certified Keppel Bay Tower, HQE-certified Origine in Paris and LEED-rated Yale School of the Environment are leading examples. However, high-performance design still carries a premium, driving the need for sustainable finance.

Critically, the majority of the buildings that will exist in 2050 are already standing. This means millions of existing buildings must be upgraded, creating a vast demand for capital. Examples like retrofitting programs in New York City¹¹ and Singapore¹² show the potential for significant energy savings and emissions reductions. Sustainable finance is essential for this transition.

The details of this challenge vary by country, regions and jurisdictions as small as towns or cities. Yet there are common themes around the world. New development must deliver buildings that operate at or near net zero emissions, with minimal or zero on-site combustion and thoughtful consideration for energy supply. This includes understanding and mitigating upfront (embodied) emissions from construction processes and materials. Existing buildings must become dramatically more efficient and, over time, shift from on-site fossil fuel combustion to clean energy. This will be accompanied by efforts to improve water conservation, reduce waste streams, and eliminate harmful refrigerants.

All of this requires capital from investors willing to:

- Accept risks for new technology.
- Scale existing solutions.
- Prioritise social impact and just transition.

Investing in green buildings can provide significant benefits. Economically, they can reduce operational costs through energy savings, often lowering utility bills and increasing property values. Socially, green buildings can enhance occupant health and employee productivity, improve air quality, and foster community resilience.

Investors and financial institutions are crucial in providing the needed capital. Green bonds and loans have already funded numerous projects worldwide but it's not nearly enough to decarbonise the built environment. Policymakers must create supportive regulations and incentives, while developers, architects, and engineers integrate sustainability into their projects. Communities and occupants play a vital role in supporting these initiatives.

We need all stakeholders. We need them now. We need all buildings to become green to protect our communities and our planet.

“ Accelerated climate action will only come about if there is a many-fold increase in finance. Insufficient and misaligned finance is holding back progress. ”

Christopher Trisos, IPCC Scientist, Lead Author
Intergovernmental Panel on Climate Change report 2023

2.1.2 The barriers

There are several barriers hindering this revolution:

- **Limited understanding of characteristics and effective strategies to use rating tools in finance mechanisms:** Many finance stakeholders are unfamiliar with the criteria and methodologies behind major green building certifications such as BREEAM, LEED, Green Star, Green Mark and HQE. This knowledge gap can hinder the effective utilisation of these tools in securing sustainable finance. This is a gap this paper hopes to reduce.
- **Unrealistic or inconsistent performance expectations across the building lifecycle:** There can be discrepancies in expected performance based on design versus actual outcomes, leading to dissatisfaction and mistrust among stakeholders.
- **Complexity and high transaction cost:** Current financial instruments rely on bespoke processes or second party opinions that are independent of industry practices, rather than relying on existing instruments that are used by industry. This increases complexity and adds additional costs to identifying whether an asset is green.
- **Misaligned priorities between stakeholders (e.g. landlord, tenants, and investors):** Different stakeholders often have conflicting priorities. For example, landlords may focus on long-term asset value, tenants on immediate operational costs, and investors on short-term returns.
- **Technical misalignments between property-related processes and finance-related processes:** A net zero development can take many years before final verification that it has achieved net zero status, creating challenges in aligning financial timelines with project milestones.
- **Differences in policy, climate, regulation, and historic conditions create variation in opportunities and constraints on project performance:** Regional variations can complicate the standardisation of green building practices and the application of universal finance mechanisms. For example, differences in the definition of stranding risk between the US and Europe means that the mitigation activities will be different.
- **Limited Access to Capital:** Smaller developers and projects in less economically developed regions may struggle to access the capital needed for green building projects, despite the potential for significant environmental benefits.

13. Source: Bloomberg. Please note that the below data is illustrative only as some bonds may not be notified to Bloomberg and / or captured incorrectly.

2.1.3 The opportunities

There is a rise in sustainable finance products designed for use in property, making it easier for real estate businesses to align funding to their values and sustainability strategies.

The real estate industry is a key contributor to the global sustainable finance debt market (across loans and bonds). According to BloombergNEF, total issuance volume (USD equiv.) for the real estate sector in 2021 and 2022 are \$178bn and \$127bn respectively. That equates to approx. 10% and 8% of the total sustainable finance issuance volume for 2021 and 2022 respectively.

TABLE 1
Sustainable Finance Labelled Bonds – Real Estate Sector Global (Note amounts in US\$)¹³

Amt issued, USDbn	Global bond market				Sustainable Finance Label RE,	Sustainable Finance Label RE,	Total RE, % total all
	Real estate (RE)		All				
	Sustainable Finance- labelled	Total	Sustainable Finance- labelled	Total			
					% total RE	% Sustainable Finance Label all	
2020	36.5	575.8	481.3	60,911.90	6.3%	7.6%	0.9%
2021	86.4	1,149.60	530.4	58,594.60	7.5%	16.3%	2%
2022	46	883.7	328.2	53,483.80	5.2%	14%	1.7%
H1 2023	12.2	531.8	180.8	27,746.20	2.3%	6.7%	1.9%



How can sustainable finance benefit the real estate sector?

- **Access to Capital:** Many financial institutions and investors are increasingly incorporating ESG criteria into their lending and investment decisions. Property developers and owners who embrace sustainable finance principles may have better access to capital and lower borrowing costs.
- **Regulatory Compliance:** Sustainable finance provides capital to meet increasingly stringent regulatory frameworks related to ESG factors including building codes and energy efficiency standards, and emissions reductions targets. Complying with these regulations can reduce legal and financial risks.
- **Long-Term Resilience:** Sustainable properties are generally more resilient to the physical and regulatory challenges associated with climate change. This resilience can protect the property's value and financial performance over time.