

Sustainability by design: creating the foundation of the UK built environment

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Introduction:

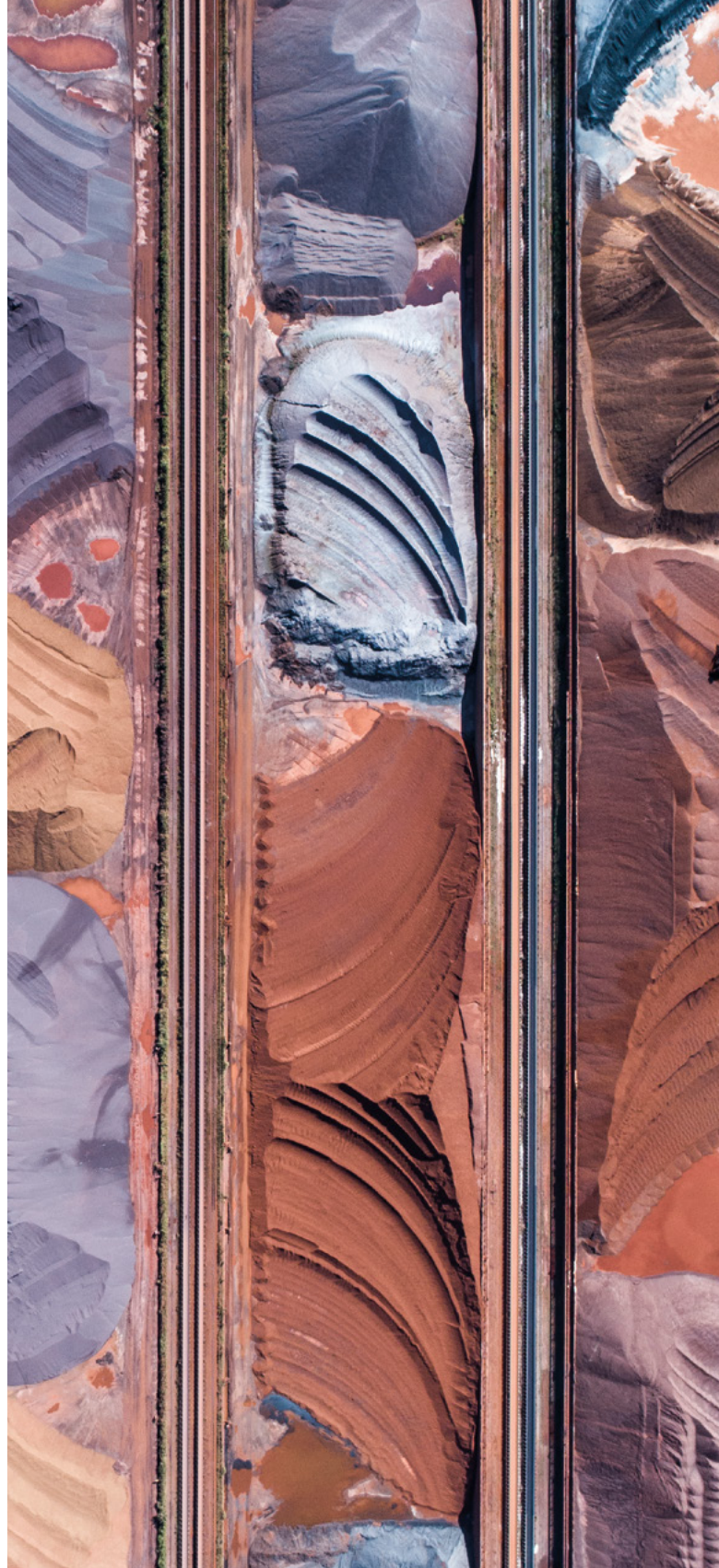
Greener building

The real estate sector accounts for 10% of global GDP, making it one of the most significant asset classes.¹ Achieving net zero – the balance between the greenhouse gases emitted into the atmosphere and those taken out – will be impossible without the rapid decarbonisation of the construction sector and the operations of the built environment. The construction industry contributes to at least 40% of carbon dioxide (CO₂) emissions,² compared with 2-3% caused by aviation globally.³ It is also a major source of raw material demand. Every year around 100bn tonnes of raw materials are extracted from the planet, equivalent to two-thirds of the mass of Mount Everest.⁴ Almost half of this is used for the global built environment. Dominant building materials such as aluminium, steel, glass and reinforced concrete are high-emission commodities.

The significant share of GDP held by the real estate sector means that a wider shift towards net zero in business will be needed, including comprehensive climate and emissions reporting by public companies, as many businesses, investors and capital allocators beyond the sector will require decarbonisation to meet their targets. The majority of commercial UK property, for instance, is invested in and managed by listed companies and pension funds on behalf of 45m UK savers and pensioners.⁵ This provides an impetus for the sector to improve its environmental performance.

40%

contribution of the construction industry to CO₂ emissions



Economist Impact and HSBC UK would like to thank the following experts for sharing their time and insights in the preparation of this report:

Daniel Burton, Chief Executive, Wondrwall

Julie Hirigoyen, Chief Executive, UK Green Building Council (UKGBC)

Lena Hök, Executive Vice President, Skanska

Emma Hoskyn, Head of Sustainability for the UK, JLL

Rob Wall, Assistant Director, British Property Federation

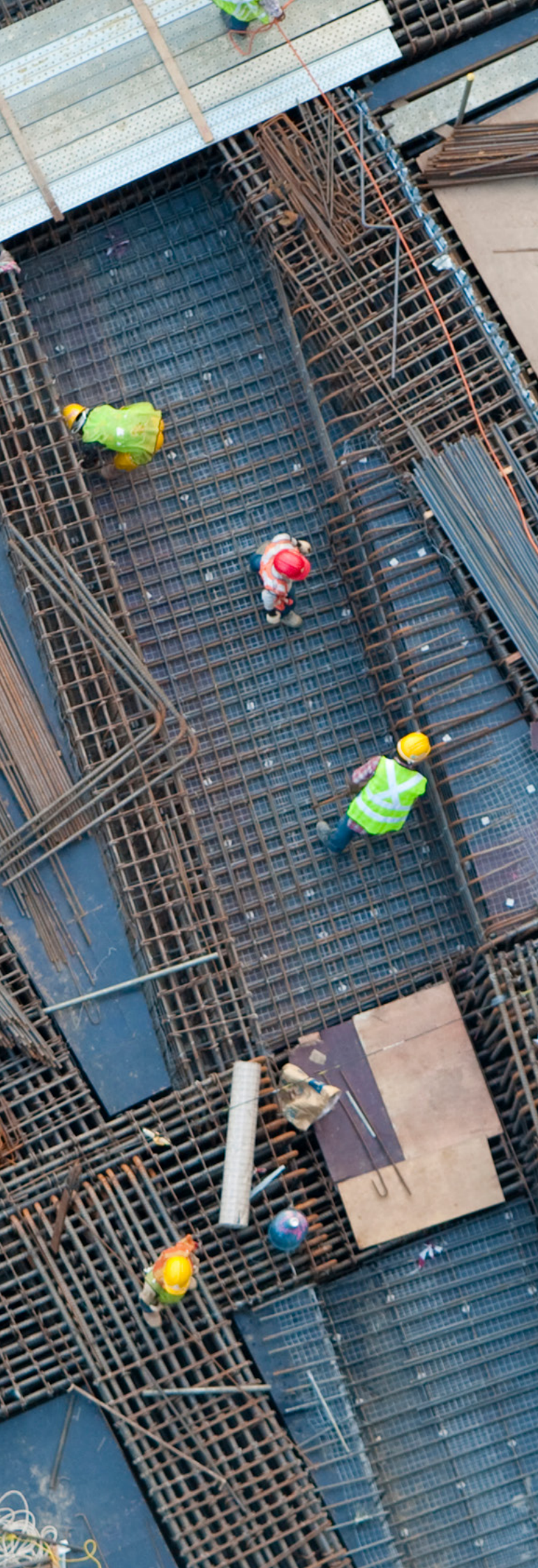
¹ <https://worldgbc.org/wp-content/uploads/2022/08/WorldGBC-Beyond-the-Business-Case.pdf>

² <https://www.weforum.org/agenda/2021/01/planet-warming-emissions-buildings-construction-climate-goals-risk/>

³ <https://www.bbc.com/future/article/20211215-the-buildings-made-from-rubbish>

⁴ *ibid*

⁵ <https://www.sustainablefinance.hsbc.com/carbon-transition/towards-net-zero-in-uk-corporate-real-estate>



Technological innovation, from smart building systems to LED lighting, as well as innovation in building materials such as green steel and green concrete, will help to achieve the goal of lowering the impact of the built environment in both new builds and existing assets. Hence, it should come as no surprise that it is a fast-growing sector, both in investments and the development of technologies. "There's a significant amount of venture capital going into new technologies in prop-tech, green-tech and climate-tech," says Emma Hoskyn, Head of Sustainability for the UK at JLL, a global provider of real estate and investment management services. The 700 members of the UK Green Building Council (UKGBC), which includes investors, developers, construction companies, architects, engineers, product manufacturers and agents, are showing their commitment to net zero not just at an organisational level but at the building, asset or portfolio level as well, according to Julie Hirigoyen, the UKGBC's Chief Executive. Against this backdrop, the green building sector is expected to account for a US\$24.7trn investment opportunity by 2030.⁶

However, the built environment sector will have major obstacles to overcome. The vast majority of buildings that will be around in 2050 (the UK's net-zero target date) already exist. Thus retrofitting will be just as – or perhaps even more – important than new builds. However, it is a costly and complex endeavour that is currently not incentivised. Today's real estate sector is reeling from additional financial pressure for funding following the global polycrisis of surging mortgage costs, reduced footfall in commercial centres in the hybrid work era, inflation and clogged supply chains. All of this could limit investment and bandwidth for the tough but necessary changes needed. This report reviews the positive trends in sustainable and net-zero approaches in new build and retrofitted assets and the key challenges to overcome to achieve net zero.

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Emma Hoskyn, Head of Sustainability for the UK at JLL

⁶ <https://worldgbc.org/wp-content/uploads/2022/08/WorldGBC-Beyond-the-Business-Case.pdf>



Chapter 1:

Green by design

A building's environmental performance is heavily determined by the material and design decisions taken at its inception, making the new-build sector critical to net zero. Building codes are the blueprints that drive improvement and establish best practices. According to the International Energy Agency, to achieve net-zero emissions by 2050 all countries need to establish zero-carbon-ready building energy codes for residential and non-residential buildings by 2030, and all new buildings should meet the standard from 2030. For retrofits this requires 20% of the existing floor area to be renovated by 2030, with annual energy efficiency renovation rates increasing from less than 1% today to 2.5% globally by 2030.⁷

Conventional legal building codes protect health, safety and wellbeing, but they have no mandatory environmental performance requirements other than those related to restrictions on the use of hazardous or harmful substances, for example. Progress towards greener building practices globally has so far been driven by voluntary, industry-led approaches. The Leadership in Energy and Environmental Design (LEED) scheme is an influential initiative. In December 2022 the total number of projects worldwide (across 74 countries) certified by the Building Research Establishment Environmental Assessment Method (BREEAM) was estimated at over 535,000, plus an additional 2.22m awaiting approval of their certification.⁸ Currently in the UK there are over 15,000 BREEAM-certified projects.

An estimated 80 countries have some mandatory or voluntary energy building codes, and in some countries existing codes are being updated to reflect the latest standards in construction practices, materials and technology.⁹ However, there is room for improvement, with only 45 countries having mandatory codes covering the entire sector, and only one-third of global floor area additions expected to be in countries with such codes by 2030.¹⁰ More than 110 countries lacked mandatory building energy codes or standards in 2021, which means that over 2.4bn m² of floor space was constructed last year without meeting any energy-related performance requirements.¹¹

The UK has taken important steps to raise the performance of new builds. In England, under regulations proposed by the government, the CO₂ emissions of new-build homes ought to be 30% lower than the current standards, and emissions from other forms of buildings must be lowered by 27%.¹² Scotland has set out a plan for all new-build homes to use renewable or low-carbon heat solutions by 2024,¹³ while the Future Homes and Buildings Standard is a proposed set of measures to be introduced in new homes built from 2025 to ensure that they are fitted with low-carbon forms of heating, in line with the UK's wider net-zero drive.¹⁴ One of the measures included in that framework – a ban on the use of new gas boilers in new builds by 2025 – is similar to Scotland's approach.

⁷ <https://www.iea.org/reports/building-envelopes>

⁸ <https://bregroup.com/buzz/all-about-breeam/>

⁹ <https://www.iea.org/reports/technology-and-innovation-pathways-for-zero-carbon-ready-buildings-by-2030/introduction>

¹⁰ *ibid.*

¹¹ <https://www.iea.org/reports/building-envelopes>

¹² <https://www.gov.uk/government/news/new-homes-to-produce-nearly-a-third-less-carbon>

¹³ <https://www.gov.scot/publications/new-build-heat-standard-scoping-consultation/>

¹⁴ <https://bregroup.com/press-releases/bre-announces-new-project-with-beis-to-modernise-home-energy-rating-scheme-in-time-for-future-homes-standard/>

The UK is also advancing its green building agenda. Part Z is an industry-proposed amendment to the UK Building Regulations 2010, which would ensure that the embodied carbon of all building projects will be assessed and capped as part of a comprehensive whole-life carbon assessment.¹⁵ When targeting embodied carbon, this will include all carbon emissions of a building, from the materials and the processes used to transporting the material, building the infrastructure and providing maintenance throughout the lifespan of the building. So embodied carbon is not merely the CO₂ emissions produced during the construction of a new infrastructure but also the emissions associated with its upkeep during its functional lifecycle.¹⁶ Whole-life carbon assessments are carried out at every stage of the construction and design process, thus providing information on the amount of emissions incurred during each cycle.¹⁷

Local-level government is also playing an important role in raising the bar and expectations on transparent reporting. London's "Be Seen" policy, launched in 2021, mandates a prediction of energy demand and carbon emissions at the design stage and post-construction for all major developments. Based on our research, data is not yet available. Energy use and carbon emissions are reported for five years post-construction and will be visible to all.^{18,19}

Substituting for sustainability

Conventional building materials have a heavy environmental footprint in terms of extraction and production (see Figure 2). To improve the performance of new builds the industry is looking to alternatives, including low-carbon concrete, timbers and biomaterials, and is accelerating the decarbonisation of conventional materials, such as green concrete and green steel, which are produced using environment-friendly energy sources.

Green concrete reduces the embodied energy and the CO₂ emissions associated with cement manufacturing and quarrying and lowers the environmental threat of industrial waste materials.²⁰ Traditionally, steel is produced using fossil fuels, but green steel is manufactured using processes that produce fewer CO₂ emissions with the help of technologies such as carbon capture, utilisation and storage, and the use of hydrogen or biomass as reducing agents or electrolysis²¹.

Material	Carbon footprint (kilogram per m ³)
Aluminium	18,009
Steel	12,090
Glass	3,600
Reinforced concrete	635
Clay brick wall	345
Green steel	N/A
Green concrete	N/A

Figure 2. Environmental footprint of conventional building materials²²

¹⁵ <https://part-z.uk/proposal>

¹⁶ https://worldgbc.s3.eu-west-2.amazonaws.com/wp-content/uploads/2022/09/22123951/WorldGBC_Bringing_Embodied_Carbon_Upfront.pdf

¹⁷ <https://www.rics.org/globalassets/rics-website/media/news/whole-life-carbon-assessment-for-the-built-environment-november-2017.pdf>

¹⁸ <https://www.sustainablefinance.hsbc.com/carbon-transition/towards-net-zero-in-uk-corporate-real-estate>

¹⁹ https://www.london.gov.uk/sites/default/files/be_seen_energy_monitoring_london_plan_guidance_2021.pdf

²⁰ <https://doi.org/10.3390/books978-3-03936-235-6>

²¹ <https://doi.org/10.1016/j.jclepro.2021.128127>

²² <https://pliteq.com/news/building-vs-carbon-footprint/>

²³ https://environment.ec.europa.eu/topics/waste-and-recycling/construction-and-demolition-waste_en

²⁴ <https://www.constructionproducts.org.uk/media/557062/how-much-construction-waste-is-there.pdf>

As evidenced by the measures outlined, the industry acknowledges the challenges in substituting for sustainability and has begun to plan how to face them. "There are two priorities," argues Julie Jirigoyen of the Green Building Council (UKGBC). "One is ensuring ambitious, meaningful and targeted decarbonisation strategies at the sector-wide level for materials high in carbon emissions in manufacturing and transportation, like concrete and steel. Second is the emergence of new types of materials, whether that's low-carbon concrete, timber-related products or substitutes like biomaterials. We wanted to turbo boost all of those whilst accelerating the decarbonisation of the materials themselves."

At the other end of the life cycle is the waste generated by construction and demolition, which contains materials such as concrete, bricks, wood, glass, metal and plastic and also needs to be recycled and upcycled. It accounts for over one-third of the waste generated in the EU,²³ and around 5m tonnes of that waste in the UK is still going to landfills, even though 90% of it is being recycled.²⁴ Such materials can be profitably repurposed to reduce further demand on energy and natural resources for future buildings and to reduce pressure on waste and landfill. Apps and digital technology are already helping to enable a circular economy. Sustainability Yard is one UK company of note, having built an application that allows users to buy, sell or give away excessive construction materials to avoid wastage.

"The second priority is the emergence of new types of materials, whether that's low carbon concrete, timber-related products or substitutes like biomaterials."

Julie Jirigoyen, Chief Executive, UK Green Building Council (UKGBC)

Energy performance in new builds

Buildings and construction are responsible for 30% of total global final energy consumption and 27% of total energy-sector emissions, meaning that optimising energy use in new builds is essential.²⁵ In new-build developments, smarter energy systems wired into the design and construction can ensure energy efficiency from day one. Evidence shows that new builds outperform existing buildings, with owners saving hundreds of pounds annually thanks to decisions including the greater use of timber, best practice floor plans that optimise natural light, and more efficient central heating systems.^{26, 27}

Tools include intelligent occupancy-based lighting and heating systems that adjust to user behaviour and demand. Wondrwall, a UK-based tech business that designs and manufactures technology to create net-zero homes, says it can reduce customer energy bills by 80-90% in new-build properties and by 60-70% in retrofits through measures such as targeted heating and warming technology based on user behaviour and trends, according to Daniel Burton, its CEO. The company's technology includes products such as a home automation system that can control a home's heating, lighting and security features through self-learning the routines of the persons inhabiting it and adapting these features accordingly; an infrared heating option; a battery storage for energy efficiency; and a solar roofing system to create clean energy.²⁸

²⁵ <https://www.iea.org/topics/buildings>

²⁶ <https://www.taylorwimpey.co.uk/inspire-me/how-to-guides/are-new-homes-more-energy-efficient>

²⁷ <https://www.avanthomes.co.uk/avant-life/new-build-homes-leading-the-way-in-energy-efficiency#:~:text=energy%20efficient%20home-,Cheaper%20energy%20bills,considerably%20lower%20rating%20of%20D%2DG>.

²⁸ <https://wondrwall.co.uk/home-automation/>



Chapter 2:

Retrofitting revolution

While new builds provide a greater scope for achieving “sustainability by design”, they only account for a small fraction of the future built environment. Currently 25% of the UK’s emissions come from buildings, both residential and commercial.²⁹ Around 80% of the UK homes that will exist by 2050 have already been built, meaning over 1m must be retrofitted every year to meet net-zero targets.³⁰ “A lot of our existing buildings will be around in 2050, so the priority is to retrofit those to be more efficient,” argues Ms Hirigoyen at the UKGBC.

Retrofitting refers to improvements to existing buildings to optimise energy efficiency, making it easier to heat and retain heat for longer and replacing fossil fuels with renewable energy supplies. Retrofitted buildings offer positive long-term savings, as demonstrated by the current energy crisis. They are better protected against energy price increases because they can generate their own energy and even sell energy back into the grid if the utility infrastructure allows it.³¹

There are “light” and “deep” retrofit approaches. Light approaches optimise performance and focus on a single aspect or feature such as lighting, while deep retrofits make a fundamental change to a building structure or service.³² The impact of a light retrofit should not be underestimated. LED lights can deliver savings of 80% compared with older lights and over 50% compared with recent lighting options, such as high-frequency and compact fluorescent lighting.³³ Asset owners can consider a “net-zero hierarchy”, argues Rob Wall, Assistant Director at the British Property Federation (BPF): they can improve the building’s fabric and energy performance, explore energy-saving measures such as on-site and off-site renewables, and they can consider carbon offsetting.

²⁹ <https://committees.parliament.uk/committee/62/environmental-audit-committee/news/171103/emissions-must-be-reduced-in-the-construction-of-buildings-if-the-uk-is-to-meet-net-zero-mps-warn/>

³⁰ <https://www.leti.uk/retrofit>

³¹ *ibid.*

³² <https://ukgbc.s3.eu-west-2.amazonaws.com/wp-content/uploads/2022/05/05110851/Commercial-Retrofit-Report.pdf>

³³ <https://www.sustainablefinance.hsbc.com/carbon-transition/towards-net-zero-in-uk-corporate-real-estate>

The challenges to the revolution

Retrofitting needs to combine the residential sector, which accounts for the majority of the built environment, and the commercial sector. For the UK the challenge is immense. It has some of the oldest housing stock in western Europe, meaning that heat disappears through walls, windows and doors. Nine out of 10 households rely on gas boilers, with UK households consuming more gas than almost all of their European peers, at around twice the EU average.³⁴

With around 70% of the UK's commercial building stock constructed before 2000, the sector accounts for one-quarter of operational carbon emissions from the built environment. This means that a widespread retrofit will be needed to achieve 2050 targets.³⁵ One assessment in 2020 found that 97% of a sample of office properties fell short of the target energy-use levels.³⁶ The UK's stock of non-residential premises is estimated at 1.8m, with around half of these constructed before 1985.³⁷ The five largest sub-sectors in terms of energy consumption accounted for 72% of non-domestic energy consumption.

Currently, the retail and office sectors are responsible for the largest share of energy consumption in commercial real estate, at 17%. In second place is the industrial sector with 16%, followed by the health and hospitality sectors tied at 11%. Other sectors account for the missing 28%. These numbers show that the emissions in the sector are quite widely spread, and it is therefore safe to infer that retrofitting would be a goal to achieve in all sectors in the commercial real estate field.

Commercial real estate owners and investors should, according to the UKGBC, work with advisers, property managers, facility managers, valuers and lenders to set targets based on energy intensity metrics for all assets in their portfolio; establish portfolio-wide strategies to transition from fossil fuels to renewable energy; upskill building facilities managers; and disclose operational energy and carbon performance of all buildings in line with the Task Force on Climate-related Financial Disclosures (TCFD) reporting requirements.³⁹ As investors and stock exchanges are putting increasing pressure on all commercial actors to report on their net-zero performance and governments are tightening the screws on the pricing of carbon, all actors will be under commercial pressure to retrofit poorly performing assets.

Energy consumption (by sector)

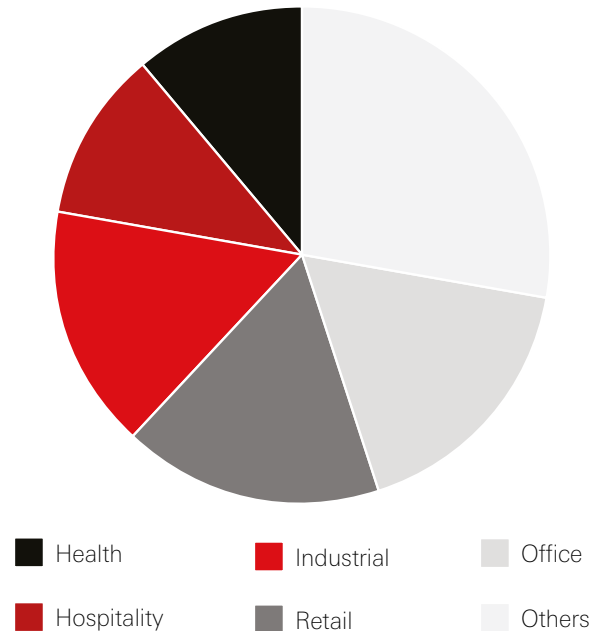


Figure 3. UK final energy consumption by sector.³⁸

Office:	17%
Retail:	17%
Industrial:	16%
Health:	11%
Hospitality:	11%
Others:	28%

<https://www.theguardian.com/commentisfree/2021/sep/28/britain-homes-energy-crisis-governments-insulation-low-carbon-heating>

<https://www.ukgbc.org/ukgbc-work/commercial-retrofit-key-considerations/>

https://www.betterbuildingspartnership.co.uk/sites/default/files/media/attachment/REEB%202020%20Snapshot_Final_0.pdf

<https://www.sustainablefinance.hsbc.com/carbon-transition/towards-net-zero-in-uk-corporate-real-estate>

<https://www.sustainablefinance.hsbc.com/carbon-transition/towards-net-zero-in-uk-corporate-real-estate>

<https://www.ukgbc.org/ukgbc-work/commercial-retrofit-key-considerations/>



Efforts to pave the way for retrofitting and sustainable housing

The UK government has taken steps to improve the environmental performance of commercial property with a proposed Energy Performance Certificate (EPC) rating to be introduced by 2030. Following a public consultation in 2021, the government publication was expected to be released in 2022 but has been delayed until 2023. “Even though the EPC rating has its flaws, it is driving improvements in the market. But the government has yet to provide the details around how that will work in practice; what’s in scope and what’s out of scope,” says Mr Wall from the BPF. Energy efficiency improvements in the commercial real estate sector will improve through measures such as NABERS UK, a new scheme for rating the operational energy efficiency of UK offices launched in November 2020, which will play a role in bridging the performance gap between the design and in-use energy performance of offices and create market transparency.⁴⁰

The government has launched the Green Home Finance Accelerator (GHFA), part of the Net Zero Innovation Portfolio, which aims to support organisations operating in, or interested in entering, the UK green home finance market.⁴¹ It has also taken some fiscal steps across both residential and commercial real estate. In the former it has launched the £3.8bn Social Housing Decarbonisation Fund (SHDF) over a 10-year period to improve the energy performance of social rented homes.⁴² Additionally, in the Chancellor’s Autumn Statement the government announced that it will create an Energy Efficiency Taskforce to administer a budget of £6bn focused on retrofitting houses, specifically addressing insulation issues and replacing boilers in houses between 2025 and 2028.⁴³

In the business sector tools include the Enhanced Capital Allowance scheme, which provides businesses with higher tax relief for investments in equipment that meets published energy-saving criteria. Normal capital allowances enable businesses to claim back a certain percentage of tax relief on equipment bought. The enhanced scheme allows businesses to claim 100% tax relief on investments in certain energy-saving equipment against the taxable profits made during the period of investment. Feed-in Tariffs (FiT) also provide payment for electricity generated from renewable energy technologies such as solar photovoltaic panels, for example.⁴⁴

⁴⁰ <https://www.nabers.gov.au/about/news/nabers-launches-uk>

⁴¹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1111585/green_home_finance_accelerator_competition_guidance.pdf

⁴² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1114571/shdf-wave-2.1-competition-guidance.pdf

⁴³ <https://www.theguardian.com/uk-news/2022/nov/17/6bn-insulate-houses-sizewell-c-jeremy-hunt-energy-efficiency-autumn-statement>

⁴⁴ <https://energysavingtrust.org.uk/grants-and-loans/feed-in-tariff/>

Conclusion:

Building a greener future

While experts welcome progress towards net zero in the UK's built environment sector, there are several obstacles that will have to be overcome to deliver on the country's net-zero targets.

- **Common standards and frameworks— and better data.** The industry needs a common methodology for measuring and reporting on environmental performance, with multiple different ESG frameworks and standards and different definitions of net zero, and the government can play a role in determining what good performance looks like, according to Mr Wall at the BPF. The ecosystem also needs higher-quality energy performance data to guide investments and set priorities for intervention and remediation. “Without data, you can't set your baseline around how your building is performing,” says Mr Wall at the BPF. “If you don't have the baseline, you can't set out your improvement plan.” The challenge is compounded by the multi-stakeholder nature of the sector. “Investors are increasingly demanding robust evidence around the impact of their investments, but it is difficult for some of our members to provide that reassurance because they can't get the data,” notes Mr Wall. Real estate investors, for instance, don't have a straightforward way of gathering data from tenanted properties, and even when such data are available, there are challenges around how to interpret them.
- **Use public procurement of civil works and infrastructure to drive progress.** Local and central governments can significantly strengthen their net-zero performance by using their own money to support and incentivise vendors who contribute to sustainable approaches. Lena Hök, Executive Vice President at Skanska, a construction and development company based in Sweden, says procurement budgets for infrastructure and civil works can positively influence the market. “If our government wants to have a degree of sustainability performance, they ought to also have sustainability as part of their requirements when it comes to public procurement,” she argues. Contracts worth up to £31bn across economic and social infrastructure will be brought to market over the coming year. The government has set a direction for contracting authorities to establish strategies and plans for achieving net-zero CO2 emissions by or ahead of 2050 for their entire estate portfolio, and for suppliers bidding for major government contracts to detail their commitment to net zero through the publication of a Carbon Reduction Plan.⁴⁶

⁴⁵ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1102386/14.116_CO_Construction_Playbook_Web.pdf

⁴⁶ <https://www.gov.uk/government/publications/procurement-policy-note-0621-taking-account-of-carbon-reduction-plans-in-the-procurement-of-major-government-contracts>

- Financial support may be necessary to incentivise retrofitting in light of the polycrisis of inflation and surging costs of living and the effects of the post-covid economy.** Retrofitting the necessary 1m UK homes per year for the next 30 years will equate to five times more homes than the UK is currently building and will cost 10 times more than the financial investment in the high-speed railway project HS2.⁴⁷ This comes against the backdrop of surging mortgage and living costs and a commercial real estate sector hit by high inflation and falling incomes due to hybrid and remote work, all of which has undermined the business models of parts of the commercial real estate and services sector.⁴⁸ “It’s complex and costly to do retrofitting [currently]”, says Ms Hök at Skanska. Mr Wall at the BPF adds that decision-makers face considerable uncertainty related to which best-in-class technologies to install. “If I have to retrofit a technology today, will I have to pull it out tomorrow? We have members who aren’t investing into retrofit or refurbishment because of this uncertainty. For example, if we wait five years, will hydrogen be the solution? Or will the cost of heat pumps come down?” While the UK’s fiscal outlook is grim, experts point to options that could incentivise net-zero investments. Mr Wall mentions business rates as one tax-related intervention to drive behavioural change. While such a tax is paid by tenants, it affects price attractiveness if it makes a property too expensive to let. “Business rates are a tax that the government should look at, in terms of how it can use it to drive sustainability across the commercial real estate sector,” suggests Mr Wall.
- Building a green skills supply chain.** There is a lack of skilled personnel in the retrofitting sector, such as installers, retrofit assessors and retrofit co-ordinators.⁴⁹ According to Mr Burton at Wondrwall, there are currently only 3,000 heat pump engineers in the UK, far too few for the government’s aim to install 250,000 heat pumps over the next three years. “There’s a lot of work that you need to do from a training perspective,” he argues. However, efforts are being made by companies to fill these gaps. An example of this is the Skills for a Sustainable Skyline Taskforce, a promising initiative working to identify and bridge skills gaps to ensure that the Central London region has a globally competitive, sustainable commercial built environment needed to retain a world-leading financial and professional services sector. It will focus on identifying skills gaps, opening career and qualification pathways and promote reskilling as well as raising career awareness among Londoners, including from under-represented backgrounds.⁵⁰

⁴⁷ <https://www.ukgbc.org/news/the-importance-of-retrofitting-in-advancing-net-zero/>

⁴⁸ <https://www2.deloitte.com/us/en/insights/industry/financial-services/commercial-real-estate-outlook.html>

⁴⁹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1044598/6.7408_BEIS_Clean_Heat_Heat___Buildings_Strategy_Stage_2_v5_WEB.pdf

⁵⁰ <https://www.cityoflondon.gov.uk/supporting-businesses/business-support-and-advice/skills-for-a-sustainable-skyline-taskforce>

Conclusion

The built environment sector offers a significant opportunity to reduce carbon emissions, which are currently contributing to 40% of global emissions. The right policies and measures have the potential to help the UK to get closer to achieving its sustainability objectives.

To make the UK built environment sector more sustainable, this report has highlighted a number of measures that should be taken. New housing can be established on the basis of technological innovation and the newest scientific evidence, including LED lighting and smart building systems. In particular, the use of sustainable materials such as green concrete and steel offers a promising means for creating a sustainable fabric on which new builds can be constructed. For already established buildings, on the other hand, the key term is retrofit. The majority of buildings that will exist in the foreseeable future have already been built. As a result, retrofitting may well become a more relevant practice than building new housing per se.

Policy incentives can support this transition. Building codes and regulations that set minimum standards for energy efficiency represent tools for governments to reform the built environment sector. Similarly, applying relevant tax breaks for renovating housing can provide a financial incentive to preserve existing buildings while making them fit for the future. Creating the right policy environment will be vital for helping to secure a sustainable future for the built environment sector, brick by brick.

