

# ENERGY EFFICIENCY IN PROPERTY ASSETS REPORT



THE THOUGHTFUL INVESTOR

## INTRODUCTION

Since 2015, global energy efficiency has been improving at a slower rate than previously experienced. This is highly problematic because of the key role efficiency savings play in the transition to a cleaner and more secure energy future. In 2020, efficiency improvements measured by energy intensity were half the rate of 2018 and 2019 levels and a quarter of the rate required to achieve long term climate and sustainability goals.<sup>1</sup> The main reasons for this were that improvements in technical efficiency no longer provided the same sized gains as witnessed in the past, the levels of investment in energy efficiency remained relatively unchanged, and governments were slow to draft newer, more stringent policies.<sup>2</sup> Thankfully, this has begun to change, with governments globally committing to massive Covid recovery spending plans that will in a large part target efficiency and 'building back better', alongside public announcements of greater climate ambition, meaning the future looks more optimistic.<sup>3</sup> The energy efficiency of property can be categorised into residential, commercial, and industrial sectors, with each sector facing its own challenges to meet carbon neutral goals.

Greater energy efficiency reduces the amount of energy required to power homes and workplaces. This, in turn, should assist in reducing the UK's total emissions,

helping to align more closely with the government's 2050 Net Zero commitment. The International Energy Agency believes energy efficiency should be recognised as the first fuel, offering a "win, win, win" in terms of lower energy bills, lower emissions, and improved energy security.<sup>4</sup> When we initiated this project, it was with a view to ascertaining the property sector's understanding of the climate crisis and the need for urgent action. However, recent developments, namely Russia's invasion of Ukraine and rising energy costs, provide additional compelling reasons to expedite energy efficiency efforts.

This report outlines Castlefield's exposure to property assets across a variety of different sectors. In order to gain a greater understanding of the material issues that impact the energy efficiency of our holdings and their property assets, we carried out a questionnaire and a number of interviews with sustainability specialists in 27 of our investee companies. Of the 27 that we approached, 15 responded, equating to a 56% response rate, significantly above the average survey response rate of 30%.<sup>5</sup>

The questionnaire consisted of three different sections. The first section focused on the sustainability governance structure of the firm, the second section centered on climate risk and the final section concentrated on the environmental and energy efficiency accreditations deemed most relevant to our investee companies.

As well as highlighting the findings from our engagements, this report will also explain the key energy efficiency accreditation schemes applicable to the property sector.

1. International Energy Agency Fuel Report December 2020

2. International Energy Agency Fuel Report November 2019

3. International Energy Agency Fuel Report November 2021

4. <https://energiesprong.org/>

5. <https://www.smartsurvey.co.uk/blog/what-is-a-good-survey-response-rate>

# FINDINGS



## FINDINGS

We classified our holdings into six different subcategories depending upon their operations. These subcategories are Social Housing, Property Developers, Care Homes, Real Estate Investment Trusts, Hotels and Other (gyms and data centres). To allow for a fairer comparison, we assessed company responses against those of the other members of their respective subcategories.



### WHAT IS NET ZERO CARBON?

Net Zero Carbon is often heard of in conjunction with the year 2050. The science clearly shows that transitioning to net zero by 2050 will be essential if global warming is to be kept well below 2 degrees and preferably 1.5°C compared to pre-industrial levels, as called for in the Paris Agreement – a legally binding treaty signed by 196 parties.<sup>1</sup> Achieving net zero requires both a reduction in overall greenhouse gases emitted, as well as the implementation of methods that actively absorb and remove emissions from the atmosphere. In the context of the UK, a landmark Net Zero Strategy published in October 2021 outlines how the 2050 target will be met by establishing policies and proposals for the decarbonisation of all sectors across the UK economy.<sup>2</sup> The aim of net zero is to ensure that greenhouse gas emissions are “equal to or less than the emissions the UK removed from the environment.”<sup>3</sup>

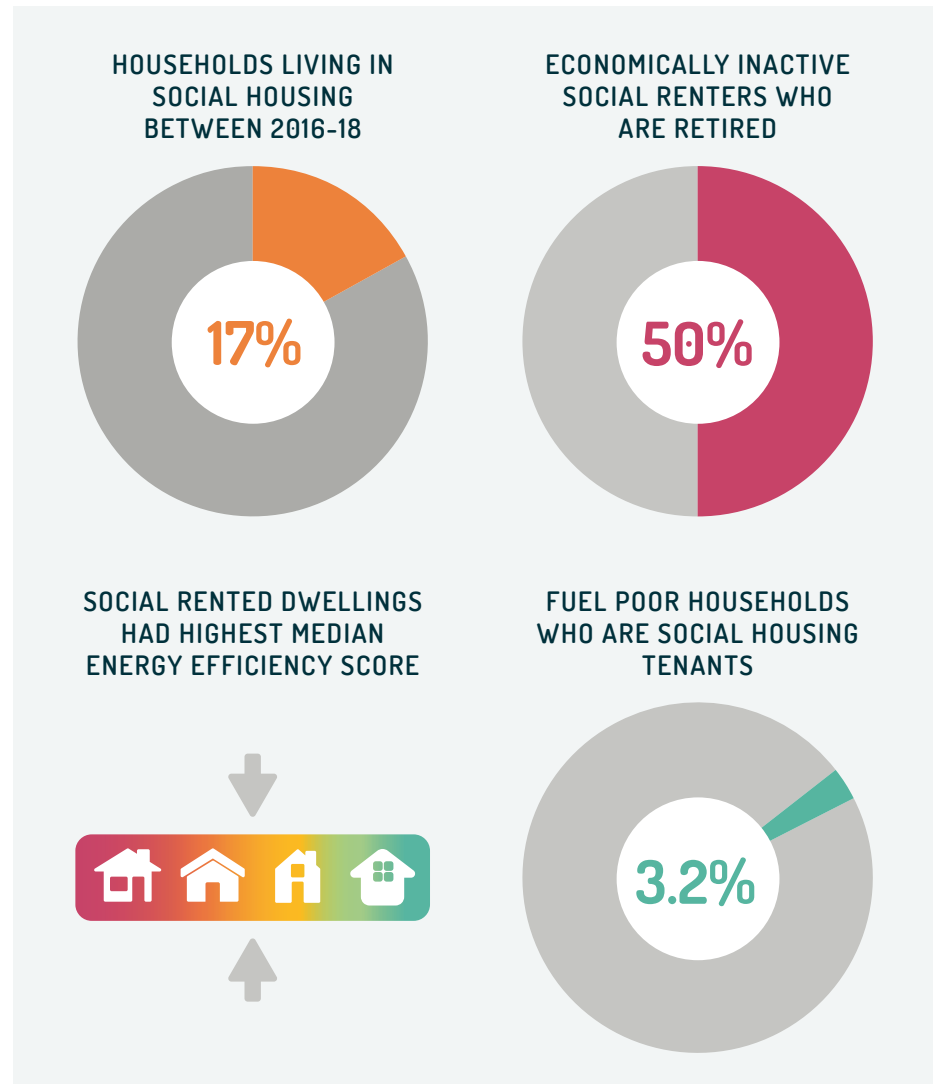


### WHAT ARE STRANDED ASSETS?

Stranded assets are defined as assets that, prior to the end of their lifespan, have suffered from devaluations, write-downs or have been converted to balance sheet liabilities for reasons related to climate change. This could be as a result of a change in relative costs or prices, due to physical risk such as flooding or droughts, or from a change in government policy.

1. <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>
2. <https://www.gov.uk/government/publications/net-zero-strategy>
3. Office for National Statistics (<https://bit.ly/3D5CoDP>)

## SOCIAL HOUSING



Social housing is lower cost, rented housing provided by landlords that are registered with the social housing regulator. Known as 'social landlords', these operators are typically councils or housing associations. Social housing is likely to be cheaper, and can offer greater security from eviction, than private rented housing.

### Social Housing Facts & Figures

- In 2016 to 2018, 17% of households (3.9 million) in England lived in social housing (they rented their home from a local authority or housing association).<sup>1</sup>
- Half of economically inactive social renters are retired.<sup>2</sup>
- Social rented dwellings had the highest median energy efficiency score across all property types in both England and Wales.<sup>3</sup>
- 3.2% of fuel poor households are social housing tenants.<sup>4</sup>

We hold bonds issued by a number of housing providers and for this project we spoke to two providers to ask if they were taking any steps to assess the vulnerability of existing and future assets to climate risk. One of the organisations, as a first step, has appointed the Carbon Trust to estimate their financed emissions. The results from the Carbon Trust's analysis will be used to establish a roadmap of action eventually leading to climate targets, a net zero strategy and disclosures against the TCFD framework (see text box to the right/below). For this social housing provider, properties are insured against flooding and emerging housing market regulation is monitored, with the aim of staying ahead of the potential transitional risk from government led initiatives, such as the ban on gas boilers in new homes from 2025.

1. GOV.UK (<https://bit.ly/3y00twA>)

2. <https://www.theguardian.com/housing-network/2015/nov/18/who-lives-41-million-social-housing-homes-england-wales>

3. <https://www.ons.gov.uk/peoplepopulationandcommunity/housing/articlesenergyefficiencyofhousinginenglandandwales/2021>

4. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/966509/Annual\\_Fuel\\_Poverty\\_Statistics\\_LILEE\\_Report\\_2021\\_2019\\_data.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/966509/Annual_Fuel_Poverty_Statistics_LILEE_Report_2021_2019_data.pdf)

The second provider was in a similar position in terms of being in the early stages of assessing its carbon risk. They responded saying that they too are in the process of baselining home performance as a means of assessing the condition of the current housing portfolio. A gap analysis is being carried out in order to understand what interventions need to be taken to reach EPC C standard (see text box above/below etc) and also to reach zero carbon.

Both responses imply these social housing providers still have a way to go before they can consider themselves to be successfully managing their response to the climate crisis. Increased energy efficiency means lower bills so social landlords have a dual imperative to act.

There are however some positives to be taken from these responses. Both social housing providers are currently in the process of measuring their carbon emissions. Whilst this may seem rudimentary, in the wider context, this is an important first step in the right direction for the sector to drive up energy efficiency rates and transition to a net zero economy.

In fact, we asked these social housing providers what challenges they anticipated in making the transition to low or zero carbon operations, and responses were consistent across the sector.

Firstly, they cited concerns around the granularity of data required and its availability. In order for the social housing sector to make improvements to their energy usage, they need to be able to accurately monitor areas of inefficiency. Social housing property portfolios are often managed by multiple housing and care providers, which brings its own difficulties, in both collating the data and ensuring it is reported consistently. In addition, measuring carbon is no simple task, and to do it properly, it can be quite expensive.

Secondly, rectifying any inefficiencies can also be an expensive process, and may not be possible in all instances, thereby posing the threat of stranded assets as environmental legislation becomes more stringent. The urgent need for social housing assets in the UK also means that quicker, patch up renovations may prove to be more attractive in the short term rather than energy efficient retrofits that take more time to complete. As such, any refurbishments carried out on these properties will likely need to be completed whilst occupants, sometimes vulnerable occupants, are still living in the building. Minimising disruption therefore is a key challenge for any building work being undertaken.

Finally, the building of new assets and the refurbishment of existing assets to levels that are compliant with current and future carbon requirements uses methodologies that not all developers are familiar with, or able to carry out. Local suppliers might also be unable to source the materials needed to deliver these enhanced efficiencies and, if they can, they may come at a significant premium. These challenges are seemingly industry-wide and must be addressed for the sector to successfully transition into carbon neutrality.

### What is TCFD

The Task Force on Climate-related Financial Disclosure (TCFD) was set up by the Financial Stability Board in 2015 with the principle aim of encouraging companies to provide more detailed information to investors on their carbon footprint and exposure to climate risk and opportunities. Higher quality disclosures by companies can promote better informed investment, credit and insurance underwriting decisions and enable stakeholders to understand the financial system's exposures to climate-related risks.<sup>1</sup>

1. <https://www.fsb-tcfid.org/about/>

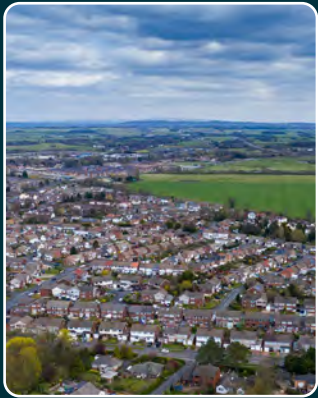
# PROPERTY DEVELOPERS



## PROPERTY DEVELOPERS

Developers are typically who you might first think of when analysing the property sector. They are on the front line of energy efficiency and carbon innovation because they build the property assets we live, work, and socialise in.

### Property Developer Facts & Figures



There were 49,470 completed homes in the first quarter of 2021 – the highest figure in over 20 years and a 4% increase compared to the last 3 months of 2020<sup>1</sup>

To meet the unmet housing backlog and provide for future demand, the country needs to build 340,000 homes per year until 2031.<sup>2</sup>



Energy use by UK households has risen 18% in 40 years.<sup>3</sup>

A typical domestic household in the UK consumes 3,100KWh of electricity per year<sup>4</sup>



80% of buildings that will be in existence in 2050 have already been built.<sup>5</sup>

1. <https://www.gov.uk/government/news/home-building-stats-show-continued-increase-in-starts-and-completions-despite-pandemic>

2. <https://www.showhouse.co.uk/news/uk-needs-to-build-340000-new-homes-a-year-until-2031/>

3. <https://www.theguardian.com/environment/datablog/2011/jul/21/uk-household-energy-use>

4. <https://www.gov.uk/government/publications/household-energy-savings-through-switching-supporting-evidence/many-households-could-save-around-200-per-year-through-switching-energy-supplier-basis-for-claim>

5. <https://www.theguardian.com/business/2023/mar/11/old-walls-new-life-britains-builders-embrace-the-retrofit-revolution>

Across the Castlefield funds, we have exposure to two property developers. Both developers responded to our questionnaire. Firstly, we asked how frequently they engaged with their stakeholders on climate-related issues and how successful these engagements had been in the past. Interestingly, one of the respondents indicated that, historically, there had been limited engagement with stakeholders on the topic of ESG.<sup>1</sup> However, over the past 12-18 months, they had seen a marked increase in the number of specific questions received regarding their preparedness for climate change and its associated risks. In contrast, the other property developer that we hold has shown a high level of engagement with stakeholders on the topic of sustainability and ESG. They listed a number of successful engagements across various stakeholder types. Examples include working closely with the Scottish Government in working groups and consultations on the introduction of carbon policies that are both practical and deliverable. The developer also worked with local authorities on plans for sustainable development policies, most notably pioneering the use of waste plastic when constructing new roads.

We also asked the property developers if their assets will maintain regulatory compliance over time, given government commitment to a net zero economy by 2050. Whilst both developers emphasised the importance of remaining regulatory compliant over time, one firm indicated that clearer government guidance was required. The other developer emphasised that 99.9% of the properties in the portfolio had compliant EPCs and the three properties that didn't were as a result of an unexpected downgrade following a recent assessment and are currently undergoing upgrade works. They also emphasised that they are working towards all properties attaining EPC ratings of C or above, well ahead of the 2035 government requirements. The disparities in the two answers could potentially lie in the difference in size of the two operations. Larger developers are likely to possess better resources and have the capacity to keep track of changing regulation.

We also asked if they had assessed how climate change would impact the energy efficiency and emissions performance of their property assets. In response, one developer highlighted that it is likely that additional cooling may be required for buildings as a result of expected hotter temperatures. Both developers also stressed the importance in managing the energy intensity and efficiency of assets in the future.

1. Environment, social and governance

## WHAT IS 'EPC'?



Energy Performance Certificates (EPCs) measure the energy efficiency of a property on a scale of A-G, with an E rating currently required in order for the building to pass. EPCs were first introduced in 2007 and are a legal requirement for a building to be sold, let, or constructed. They measure the amount of energy used per m<sup>2</sup> and the level of CO<sub>2</sub> emissions produced. Once obtained, an EPC is valid for 10 years. The most efficient homes, which should have the lowest fuel bills, are in band A. The Certificate includes the current energy efficiency rating, the potential rating once certain improvements are made and a cost saving estimate from making these changes.<sup>1</sup> The highest rated homes should emit the lowest levels of CO<sub>2</sub>. Under current government proposals, the minimum standards for EPC's will increase from an E to C rating for new lettings by the end of 2025 and all lettings from the end of 2028. Property managers who do not meet this will face a £30,000 fine as well as having an unlettable property.<sup>2</sup>

1. <https://www.gov.uk/buy-sell-your-home/energy-performance-certificates>

2. <https://www.thelandsite.co.uk/articles/changes-to-epc-rules-for-landlords-from-2025>

# CARE HOMES



## CARE HOMES

Care homes provide a vital service for some of the most vulnerable people in society and their importance will only increase moving forwards given the demographic trends of the UK. Given this, it is important that the current stock of care homes is 'future proof' and that any new developments are built and maintained to an appropriate minimum standard.

### Care Home Facts & Figures



Care home residents need to be kept warmer than average and care homes are by their nature 24-hour operations, so high energy consumption is typical.<sup>1</sup>



There are about 17,600 care homes in the UK. Around 70% of care homes are residential settings, while nursing homes make up 30% of the total number of care homes.<sup>2</sup>



Heating typically represents a large proportion of a care home's energy bills.<sup>3</sup>



The care home sector is worth around £15.9 billion a year in the UK, with around 410,000 residents.<sup>4</sup>



On average, a 20-bed nursing home uses a total of 395,000 kWh of energy, which is the equivalent of 18 small/medium sized UK homes.<sup>5</sup>

1. <https://www.gov.uk/government/news/home-building-stats-show-continued-increase-in-starts-and-completions-despite-pandemic>

2. CareHome (<https://bit.ly/3gfPMwe>)

3. <https://smarterbusiness.co.uk/blogs/energy-efficiency-in-care-homes-why-should-we-care/>

4. <https://www.gov.uk/government/publications/care-homes-market-study-summary-of-final-report/care-homes-market-study-summary-of-final-report>

5. <https://www.utilitybidder.co.uk/app/uploads/2020/07/care-homes.pdf>

We surveyed three separate care home providers in our study, of which two responded. We asked which environmental and energy efficiency accreditations they deemed most important. We also asked what targets they had set for said accreditations. The two accreditations that were referenced were BREEAM and LEED: both are internationally recognized industry standards. Moving forward, one of the providers stated their ambition to meet the minimum standard of 'BREEAM Excellent' for all future new builds. The other highlighted their involvement as a signatory to the World Green Building Council's Net Zero Carbon Buildings Commitment, which promotes leadership action towards achieving total sector decarbonisation.

We also asked the care home providers what role energy efficiency played in their plans for achieving net zero carbon emissions by 2050. Both care home providers emphasized its importance: energy meters are being installed across the housing stock to improve measurement and discussions are under way to work with occupiers to reduce energy consumption in buildings. However, reducing consumption will be a challenge, given that the vulnerable residents living in the homes often require the central heating on throughout the day to stay comfortable. EPC ratings of B and above are being targeted and the sourcing of renewable energy alone will help to offset this in some part, but the providers were keen to stress that the comfort of residents must not be sacrificed for efficiency purposes. A challenge that was highlighted in one of the responses surrounded the refurbishment of protected buildings. The nature of refurbishment works is severely restricted for protected buildings therefore, not all energy efficiency opportunities are feasible.

### **BREEAM**

BREEAM is the world's leading third-party certifier of sustainability performance for individual buildings, communities, and infrastructure projects. Assessment and certification of projects can take place at multiple stages throughout the development cycle, from new construction to in-use and refurbishment. BREEAM ratings range from 'Passing' to 'Outstanding' – those awarded the latter are deemed to be innovators. Ratings are earned by scoring points across a variety of different sustainability categories. A weighted balanced scorecard approach is taken, meaning that deficiencies in some categories can be compensated by outperformance in others. In order to receive an outstanding score, a minimum standard is required across all categories.

### **LEED**

LEED (Leadership in Energy and Environmental Design) is an internationally recognised accreditation that indicates whether a building or community was designed and built to be environmentally friendly. Buildings that bear a LEED certification are more energy and resource efficient, produce lower carbon emissions and create healthier places for people to live. Similar to BREEAM, projects earn points by addressing a number of key sustainability metrics including climate change and biodiversity. LEED accreditations vary in esteem from certified status to platinum standard.<sup>1</sup>

1. RTS (<https://bit.ly/3D8Sfj>)

REAL ESTATE  
INVESTMENT  
TRUSTS (REIT)



## REAL ESTATE INVESTMENT TRUSTS (REIT)

Real Estate Investment Trusts are investment companies that own, operate, or finance income-generating real estate such as warehouses, shops, and offices. REITs make it possible for individual investors to earn dividends from real estate investments, without having to buy, manage, or finance any of the properties themselves. Most REITs are publicly traded like stocks, which makes them highly liquid (unlike physical real estate investments). The different property types that fall under the REIT category are vast and could include apartment buildings, cell towers, data centers and medical facilities. To qualify as a REIT, 75% of the company's assets must be rental properties and 75% of profits must come from rental activities. Income investors like REITs because they are legally required to pay out 90% of their rental income as dividends. This gives them stable and predictable streams of income, whilst also leaving opportunity for capital uplift.

### Real Estate Investment Trust Facts & Figures



There are over 50 REITs with a market capitalisation of over \$70bn listed on London Stock Exchange investing across industrial, office, residential, retail, specialty, hotel and lodging real estate.<sup>1</sup>



Real Estate Investment Trusts (REITs) were introduced in the UK in 2007. Since then, most of the UK's largest property companies have converted to REITs, including big names like British Land and Land Securities.

1. LSEG (<https://lseg.group/3VAi98A>)

In our analysis, we surveyed eight REITs comprising a variety of assets and six responded. One of the questions we asked these companies was if they have a director responsible for assessing the impact of climate change on the company. The results from this were particularly interesting because they varied from company to company. Two of the companies had a senior director in place to oversee sustainability matters. A further two companies had working groups/committees that were specifically set up for this purpose. The final two emphasised that the whole board has the responsibility of focusing on ESG matters more generally. A potential drawback of this however is that without a defined forum for discussing these issues, it is easy to 'kick the can down the road'.

We also asked if there were any potential business opportunities that could arise from the transition to net zero. The REIT respondents cited numerous possible opportunities, particularly the ability to better meet the demands of tenants who are increasingly aware of their carbon footprint. One opportunity we found particularly interesting was the generation of new revenue streams. The example given was the installation of on-site solar PV assets. These assets can supply the buildings they are installed on with their own supply of energy and then any surplus can be sold back to the grid. The most energy efficient assets could also be marketed at a rental premium.

Finally, we asked the REITs in our sample about the proportion of their property portfolio that was in areas deemed vulnerable to climate-related risks such as flooding. Interestingly, two of the REITs use a third-party data company to create a risk-profile for the portfolio on a weighted asset value basis. From this, a score is generated, and the portfolio is categorized low, medium, or high risk. One portfolio was classified as low risk and the other was medium risk (albeit only marginally below the low-risk category). The remaining REITs assessed flood risks by more traditional means, and generally only had a select few assets that were potentially at risk. Those that were vulnerable had flood protection measures in place to help mitigate the risk.

## GRESB



GRESB is an international, independent accreditor that collects, validates, scores and benchmarks ESG data to provide business intelligence, engagement tools, and regulatory reporting solutions. GRESB is investor-led and the actionable and transparent Environmental, Social and Governance (ESG) data is supplied directly to the financial markets. A firm's GRESB rating is determined by its GRESB score and its quintile position relative to all other participants, with those in the top quintile awarded a five-star rating. Additionally, the Green Star can also be achieved by receiving scores of 50+ in the performance, development, and management metrics. In order to maintain GRESB status, continuous improvement year on year is required.

HOTELS



## HOTELS

Every year, millions of people visit hotels and make use of their facilities. From long weekends to city breaks and business travel, hotels play a key role in housing holidaymakers and business travellers alike. As heavy users of heating and ventilation systems, it is vital for hotels to be able to track and manage their carbon emissions.

In our analysis, we interviewed two different hotel chains. Firstly, we asked the hotel operators if they had science-based or net zero carbon emissions targets and, if so, whether could they provide details on their carbon reduction pathway. Both hotel chains indicated that they had plans to become net zero however they were found to be at different stages of the journey in formulating and implementing those plans. One of the hotel chains explained that they are currently developing their net zero plan and that it should be ready to report by the end of 2022.

The other hotel chain was much further advanced into its net zero planning, having set science-based targets (SBTi) with the intention of becoming net zero by 2040. They also mentioned that internal targets have been set for reducing carbon intensity and Scope 1 & 2 emissions by 2025. In addition, a review of Scope 3 emissions has been carried out, with the findings being factored into the SBTi-aligned reduction plan.

We also asked if the hotel operators were taking any actions to ensure that those supplying goods and services, including utilities to their property assets, are climate resilient. Interestingly, only one of the hotel chains responded to this. They stated that their procurement strategy includes a number of ESG factors that help to increase the resilience of their supply chain. Suppliers carbon output is monitored, and where available, renewable energy providers are preferred. In addition, climate-related questions are included in supplier RFIs,<sup>1</sup> which is a good way of firms using their influence to promote better environmental standards.

### Hotel Facts & Figures



The average business or holiday hotel has between 50-150 rooms. Estimates suggest that the average energy usage per day in a standard hotel would be between 2,500 – 7,500 kWh. To put this into perspective, the average UK family household uses around 3,100 kWh of electricity in the entire year.<sup>2</sup>



Heating is the single biggest energy cost in hotels.<sup>3</sup>



The hotel sector accounts for around 1% of global carbon emissions and this is set to increase.<sup>4</sup>



In 2019, the per capita emissions of CO<sub>2</sub> produced by the accommodation and food service industry in the UK was estimated to be 48.75 kilograms.<sup>5</sup>

1. Request for Information
2. <https://nationalhotels.co.uk/much-electricity-hotels-use/>
3. <https://www.yuenergy.co.uk/energy-saving-hospitality-business-guide/>
4. Sustainable Hospitality Alliance (<https://bit.ly/3MFDLFT>)
5. Statista (<https://bit.ly/3Tt0kxv>)



OTHER

## OTHER

The 'Other' category of companies that we approached were comprised of assets such as gyms and data centres. Whilst these assets differed from each other, the one thing they had in common was the importance of property in their business models.

We had two responses in this category. We asked these companies if they had a science-based or net zero carbon emissions target and, if so, to provide details. Both companies either already had science-based targets in place or were working closely with SBTi to have targets implemented in the near future. Both companies wish to be carbon neutral well ahead of the 2050 goal, with one setting the ambitious target of being carbon neutral by the end of 2023 and reducing emissions by 85% by 2050. This is really positive because SBTi approved targets are third-party verified and have actionable short to medium term targets that are aligned with the 1.5°C Paris commitments.

We also asked if they had appointed a director to take responsibility for assessing the impact of climate change on the company. One of the companies employed a chief sustainability officer (CSO) who chairs the sustainability council and holds responsibility for driving the sustainability agenda and setting annual objectives and priorities. The CSO reports directly to the chief financial officer (CFO), who in turn acts as the sustainability sponsor for the executive board and reports on sustainability topics regularly to the audit committee of the supervisory board. In contrast, the other company operates a sustainability working group, which reports to EXCOM, who then feed this through to the board. There is also a Health, Safety and Wellbeing Committee that encompass some aspects of sustainability although moving forwards, they are looking to expand this committee so that it covers all aspects of sustainability. The differences in approach of both companies could be explained by their relative size differential and the varying stages in sustainability disclosure that both are at.

1. Uswitch (<https://bit.ly/3DD4oir>)
2. <http://content.time.com/time/business/article/0,8599,2032281,00.html>
3. SLATE (<https://bit.ly/3U37KRm>)
4. Digital Reality (<https://bit.ly/3W5TyJ8>)
5. <https://energyinnovation.org/2020/03/17/how-much-energy-do-data-centers-really-use/>
6. <https://ailab-ua.github.io/courses/resources/ScienceDataCenterEnergy.pdf>

### Facts & Figures Regarding Gyms



UK gym goers generate the equivalent of 41.62GWH per year with their workouts.<sup>1</sup>



The idea of using exercise equipment to generate electricity is something that has been discussed over the years. In fact, a gym in Hong Kong has been doing this since 2007.<sup>2</sup>



Treadmills are, by far, the most popular machines in the club, but they're also the most prodigious consumers of energy. On average, a treadmill uses between 600 and 700 watts of energy.<sup>3</sup>

### Facts & Figures Regarding Data Centres



On a global scale, 3 percent of all electricity used in the world goes to data centres. The 416 terawatts used is greater than all the electricity used by the UK.<sup>4</sup>



On average, servers and cooling systems account for the greatest shares of direct electricity use in data centres, followed by storage drives and network devices.<sup>5</sup>



Between 2010 and 2018, global IP traffic—the quantity of data traversing the internet—increased more than ten-fold, while global data centre storage capacity increased by a factor of 25 in parallel.<sup>6</sup>

## CONCLUSION

This report aimed to provide a deep dive into the energy efficiency of several of Castlefield's investee companies whose operations rely on property assets to generate revenue. We sent out questionnaires and interviewed several of our investee companies seeking to understand more about how companies allocate responsibility internally for climate risk, the relevant metrics and targets, and the current and future risks and opportunities of the property portfolios. We separated out our investee companies into various subcategories to provide a fair comparison. These categories included social housing, property developers, care homes, REITs, hotels, and the remainder were grouped into the 'other' category.

For the social housing subcategory, we found that one of the greatest risks was stranded assets and the possibility of not being able to bring a proportion of the property portfolio up to adequate standards for reasons such as cost or being unable to receive planning permission.

For property developers, over the past two years, ESG engagement has been a mixed bag, as it became apparent that one developer needed to increase their efforts, while another was already engaging widely with its stakeholders. An explanation for this difference could be the type of developments each developer specialises in. For the home builder, extensive consultation with a variety of stakeholders is normal practice whereas, for office providers, this is historically less common.

Energy efficiency was deemed doubly important for the care homes subcategory because, due to the vulnerability of the homes' occupants, a reduction in energy consumption needs to be thought through carefully to avoid discomfort for residents.

Real estate investment trusts see the switch to more efficient buildings as a great opportunity with the potential to produce new revenue streams, such as onsite solar PV or the introduction of premium leases for the assets classified as the most energy efficient.

We found that the hotels subcategory either already have or are in the late stages of developing their plans for the transition to net zero. In addition, these plans were established in conjunction with SBTi and are therefore aligned with the Paris goals of a 1.5°C temperature increase in global warming.

For the remaining holders grouped together in the 'other' category, we found that the approach to overall responsibility for climate strategy varied across sector and market cap. Larger, more established companies preferred having a chief sustainability officer to oversee climate risk, whereas smaller cap companies preferred sustainability working groups or committees.

The research carried out by this report is helpful for us as asset managers because the responses from companies informs us on how energy efficiency best practice is evolving across sectors. In turn, this allows us to ask the right questions during meetings, challenge companies more effectively through our engagements, and, ultimately, keeping the pressure on management teams to continually set higher standards of best practice.



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