



Catalyst Housing Group
SHIFT Sustainability Report
2019

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Welcome to your 2019 sustainability report

This report is a gap analysis between your current environmental impacts and safe levels of impact. The safe levels are science-based targets which have been derived by government institutions and reflect limits that, if attained, will have positive benefits for long term human wellbeing.

Although there is a fair way to go before we have a truly sustainable social housing stock, there are emerging drivers that will impact sustainability within social landlord organisations. These can be broadly categorised as follows:

- increased staff and resident desire for “action” – the mass climate protests and media coverage of plastic waste has highlighted these concerns
- financial benefits – as well as residents benefitting from improved homes, there is increased evidence showing financial benefits to landlords. The most novel source is via “pay-as-you-save” finance mechanisms which bring in new cash for the landlord. As well as this, financial savings can come from direct energy bill savings, reduced maintenance costs and reduce staff retention costs
- increased Government policy signals – most recently the introduction of Streamlined Energy and Carbon Reporting (SECR) legislation which is impacting some landlords. In addition, the 25 Environment Plan, Clean Growth Strategy, Fuel Poverty, Minimum Energy Efficiency Targets all signal that Government is requiring more compliance
- “right thing to do” – social landlords recognise that their organisations and housing stock have a huge impact on the environment and that they ought to address this

The best way to deal with these drivers remains to take a strategic approach and embed sustainability into an organisation. Having an experienced third party review the impacts each year helps ensure that the strategy is being adhered to, so that the benefits can be realised.

SHIFT’s unique environmental scoring system provides a standard to attain. Bronze, silver and gold reflect the level of environmental performance, whilst the platinum level signifies a landlord that is on a trajectory to reach sustainable environmental impacts. Attaining any SHIFT standard helps landlords demonstrate to stakeholders that they are “doing the right thing” and doing the best for staff and residents alike.

This report showcases not only your performance but how far your organisation can go. As always, we look forward to supporting you on your journey to sustainability.

Suss Housing Team

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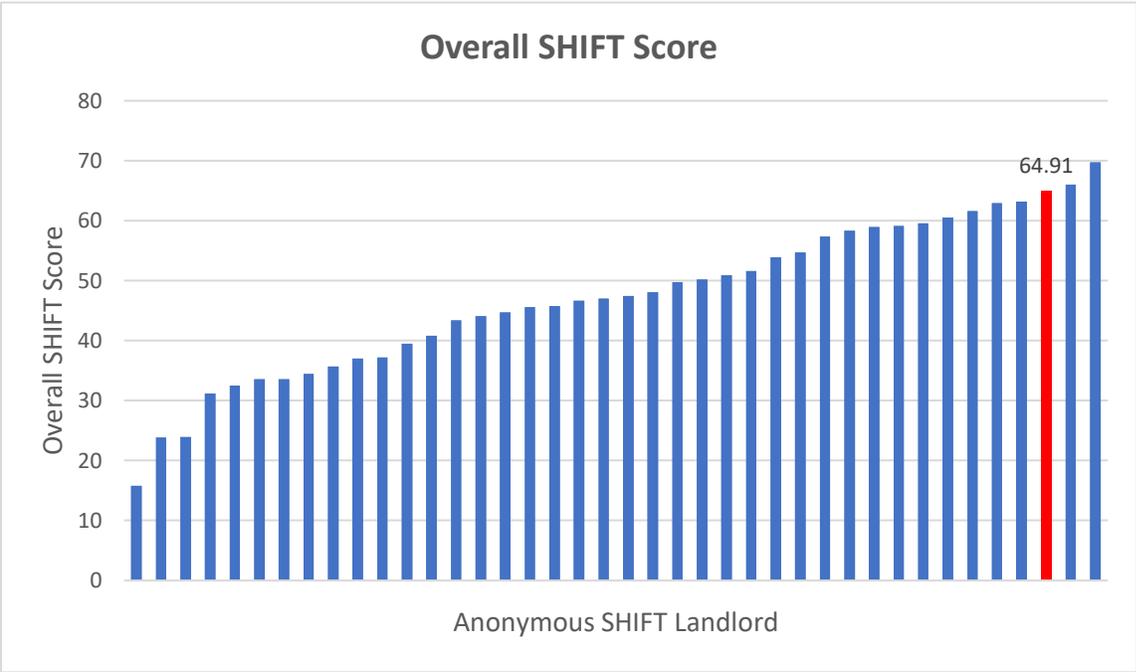
Executive summary

This report presents the sustainability performance of Catalyst across strategy and leadership, existing homes and offices, supply chains and operations and new builds. It spans energy and resource use, transport and travel, resident engagement, climate risk, biodiversity and responsible sourcing, thereby providing a comprehensive overview of your organisation's environmental footprint.

Catalyst is a large housing organisation based mainly in West London and the Home Counties with 600+ employees managing over 14,000 social housing rental properties. The results of this assessment will show, as best as the data allows, the gaps between Catalyst's current environmental performance and environmentally safe levels of impact.

Catalyst has achieved the SHIFT gold standard with a score of 64.91. It ranks 3rd out of the 40 most recent SHIFT assessments. Over the next sections you will see the breakdown of the score and recommendations. A snapshot of key performance areas is given below:





Throughout the report you will see your organisation’s sustainability performance across key areas of your business and how it compares to that of other SHIFT landlords.

The importance of SHIFT is that it drives sustainability performance improvement through reporting and benchmarking. This report offers suggestions on how these improvements can be made.

Overall performance

Environmental issue	Absolute ¹	Intensity ²	Intensity target for SHIFT platinum 2019 ³	Long term intensity target (by 2050 unless otherwise stated)
CO ₂ - homes	51,882 tonnes CO ₂	<ul style="list-style-type: none"> SAP 72.17 	SAP 72.45 ✘	SAP 86
CO ₂ – resident engagement	69 tonnes CO ₂	<ul style="list-style-type: none"> 4.9 kg saving / home 	n/a	n/a
CO ₂ – offices	496 tonnes CO ₂	76.48 kg/m ²	83.06kg/m ² ✓	25kg/m ²
CO ₂ – business mileage	139 tonnes CO ₂	10 kg CO ₂ / per home managed	n/a	n/a
CO ₂ – Maintenance mileage	648 tonnes CO ₂	46.2 kg CO ₂ / per home managed	n/a	n/a
Water – homes	1.5 million m ³	131.2 lpd	143 lpd ✓	130 lpd by 2030
Water – offices	6759m ³	11.5m ³ /employee/yr	9.63m ³ /employee/yr ✘	3m ³ /employee/yr by 2030
Waste to landfill – homes	3,792 tonnes	26.6% increase in resident recycling rates above local authority rates	3.3% increase in recycling ✓	45% increase in recycling
Waste to landfill – offices	36 tonnes	65% of waste diverted from landfill	69.03% diverted from landfill ✘	100% diverted from landfill
Responsible materials – maintenance	68%	68%	41% ✓	100% responsibly sourced
Responsible materials - offices	34.2%	34.2%	56% ✘	100% responsibly sourced
Adaptation to climate change – homes protected from flooding	12747 homes	91% of homes protected from flooding	28.43% protected from flooding ✓	100% protected from flooding
Adaptation to climate change – homes protected from overheating	13867 homes	99% of homes protected from overheating	28.43% protected from flood and overheating ✓	100% protected from overheating
Biodiversity value	Equivalent of 7.6% “protected”	TBA	TBA	17% of land ‘protected’

1 – in line with best practice environmental reporting, the absolute environmental impact is given here – this gives an overall assessment of impact

2 – again, in line with best practice environmental reporting, the intensity is given. Intensity is the environmental impact per meaningful unit. E.g. per home managed or per m² of office space. Intensity allows organisations to monitor progress towards long term aims, even if they change in size e.g. gain more homes or office space. Intensity is used for SHIFT scoring and benchmarking.

3 – When '✓' is displayed, you are achieving or exceeding the platinum intensity target for the year stated. When '✗' is displayed, the platinum intensity target has not been met.

Strategy and leadership

A strong sustainability strategy underpins robust environmental monitoring and performance at any organisation, by setting out a clear direction of travel in both the short and long term, as well as SMART KPIs to measure progress against. Points for this section are therefore awarded for specific, measurable, achievable, realistic and time-bound targets only, for a range of areas including energy efficiency, waste, water and climate adaptation.

Catalyst scored 15 out of 15 for an effective strategy. Catalyst’s Environmental Strategy 2018-2025 is freely accessible in public domain and has a formal review date embedded. In Catalyst’s Sustainability Strategy Action Plan 2018-2025 there are SMART targets for all environmental issues covered by the SHIFT assessment. Catalyst’s Sustainability Manager also provided evidence to show that their Director of Governance is directly responsible for providing information related to sustainability and environmental performance to the Executive and Group Board.

For any future changes to Catalyst’s sustainability strategy, it is recommended that SMART targets are set up to ideally span both housing stock and offices, and cover both short-term wins and long-term ambitions.



Your score for sustainability strategy and management approach, out of 15

Existing Homes

In the SHIFT assessment the environmental impact of your housing stock and its maintenance are assessed. Most of the homes that exist now will be in use in 2050. Therefore, it is essential to ensure that existing homes have safe levels of environmental impact. Your performance on each of these areas is presented below. The emission figures are based on the DEFRA conversion factors for 2018.

Average SAP

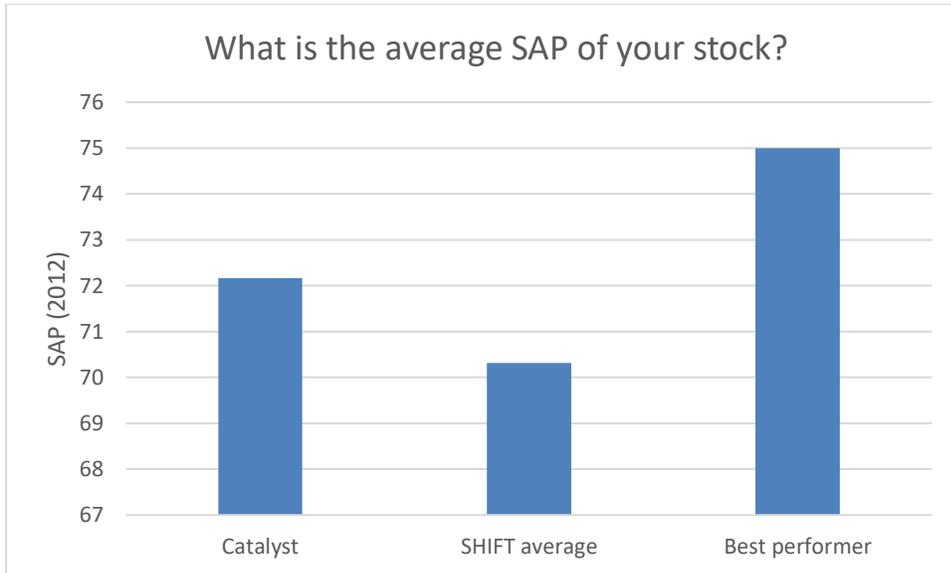
A housing association's stock is responsible on average for 99% of its total carbon footprint¹, so it is essential for landlords to foster energy efficiency improvements in their homes as a vital measure for reducing their overall environmental impact. The most effective way to measure this is with SAP – the Standard Assessment Procedure. The science-based target for all housing is an average SAP of 86 by 2050 – this target is necessary to achieve climate-change targets set in the Climate Change Act of 2008. Note, this may change in the future as the Act has recently been amended to 100% reduction in emissions.

As demonstrated below, there is currently a large performance gap which will be challenging to fill, but we strongly encourage you to build and retrofit to the highest possible standards in order to lead the way towards a low carbon future.



Catalyst provided data that had been extracted from the CROHM Energy Profiling data and showed an average SAP of 72.17 at the time of the assessment.

¹ Sustainable Homes (2017) The Review: Safe as Houses



Average SAP score from whole housing stock

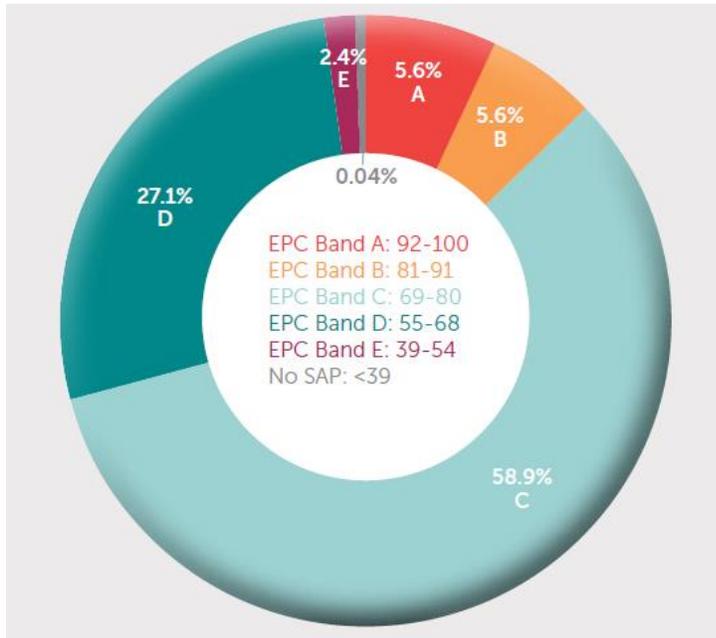
Energy efficiency improvements – what’s next?

At 72.17, Catalyst’s average SAP score is higher than both the social housing average and the average for SHIFT landlords (70.3). To be on a trajectory for achieving the 2050 target for 80% CO₂ reduction (SAP 86), landlords need to be currently at an average of SAP 72.45.

Having a detailed and costed deep retrofit strategy is the most effective way of approaching this task and there are quite a few services emerging to help. In addition, there are financial opportunities for landlords when the energy efficiency of the stock is high.

Fuel poverty

Homes with the lowest SAP scores are those most difficult to heat, so to minimise the risk of fuel poverty it is particularly important to tackle these least efficient homes. This SHIFT question aligns with the Government’s fuel poverty strategy. In essence, the strategy aims for all homes to be EPC C (equivalent to SAP 69) or better by 2030. The diagram below shows a snapshot of current social landlord’s EPC performance taken from “Housing 2050” research carried out by Sustainable Homes. It shows that 70.1% of social homes were EPC C or better.



74.1% of Catalyst's homes are EPC C or better. This data was provided by the Sustainability Officer via Catalyst's asset management database. As with the average SAP, the base data is in the process of being updated but Catalyst have target in their Sustainability Strategy Action Plan to achieve 100% EPC C or better by 2025. It is also recommended that an average SAP of 86 is achieved by 2050 which is also reflected in the action plan.

Resident engagement

Resident engagement is an important way of informing residents about the ways they can make a difference and empowering them to save both energy and money.

Catalyst has carried out a range of resident engagement activities over the last two years. These have included home energy visits where Catalyst provide advice to tenants on how to reduce their bills through the best use of their energy systems and also utilise the visits to do small works such as draught proofing and installing radiator reflectors. With 2% of resident actively engaged in energy efficiency and 100% passively, a figure of 4.9 kg CO₂ per home managed was recorded. SHIFT landlords have found the most effective way to encourage changes to habits is with active, ongoing engagement beyond passive measures such as website and leaflet information. This can include resident groups, face-to-face meetings and roadshows. Other landlords also contract Gas Safe engineers to give advice during routine service visits.

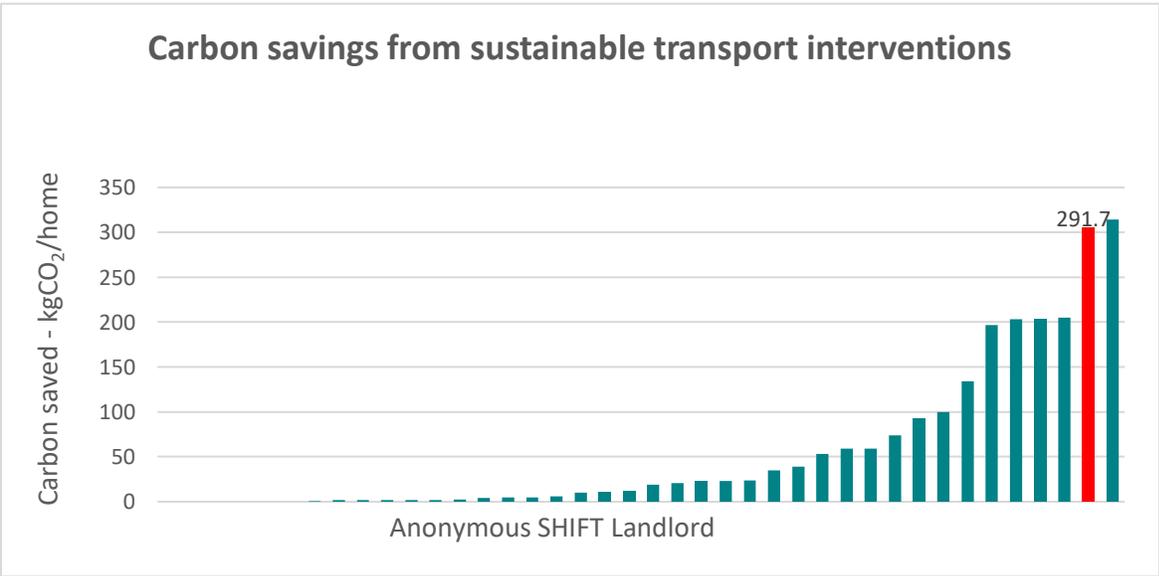


Sustainable transport

Transport facilities and initiatives for residents can help to encourage sustainable travel choices which reduce carbon emissions. This metric is based on the provision of cycle storage facilities as well as transport advice, from travel maps and timetables to cycling and eco-driving training.

Data provided by the Sustainability Officer indicated that 26% of stock had been built since the implementation of the 'London Plan' and would have had cycle storage installed. Catalyst also provides a range of excellent information within their home manual packs for new residents on more sustainable transport options. Catalyst have also engaged residents in specific neighbourhoods and are often present at community events to promote cycling and other sustainable transport options.

These measures are estimated to save around 291.7 kgs CO₂ per home. Below you can see how your performance compares to other SHIFT landlords.



Measures and initiatives which enable residents to travel more sustainably.

Transport improvements – what’s next?

With greener communities in mind, many housing organisations are looking at transport options for new developments, including negotiations with public transport operators to provide additional links and car-sharing clubs and electric vehicle (EV) charging points. EVs are providing increasingly cost-effective and lower-carbon means of transport for residents, while at the same time offer new, cost-neutral ways for landlords to facilitate this are becoming available.

Government is considering bringing forward its (currently 2040) target for removing petrol and diesel cars from sale, so demand from residents for charging facilities will rise in coming years. Forward-thinking landlords need to consider how to address this demand.

Home recycling

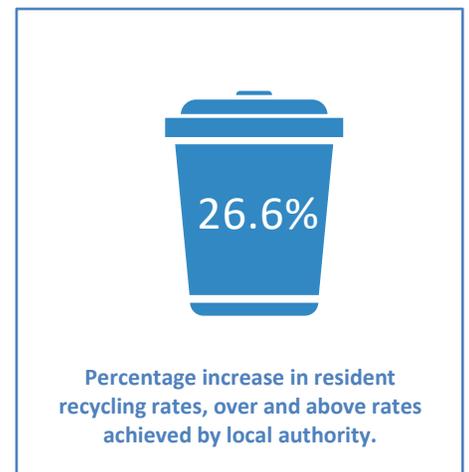
This SHIFT metric reflects the measures that landlords can take to encourage additional recycling by residents, above and beyond what local authorities are doing to boost recycling rates. In particular, this can be done by providing internal recycling bins, which enable residents to recycle without having to go outside.

It was reported that since 2008, Catalyst’s housing stock had been built to the Code for Sustainable Homes. Through analysing build dates Catalyst’s Sustainability Manager reported that, 44% of homes have had internal recycling bins fitted. Catalyst also demonstrated that 28% of residents have been actively engaged on waste recycling issues at resident meetings, door knocking by estate services teams and promoting some residents as ‘Environmental Champions’ for their neighbourhoods. These measures encourage an estimated 26.6% increase in recycling over and above local authority average.

Opportunities for more accurate monitoring of residents engaged in these projects were highlighted during the assessment which could be a target before Catalyst’s SHIFT 2020 assessment.

Fly tipping

Fly tipping can potentially have very serious impacts on both the natural environment and local communities. Catalyst’s Resident Services Team recorded 4372 flytipping incidents in the last



12 months equating to 312 per 1000 homes. This is a high number of fly tipping incidents, but Catalyst have been taking action through engaging with residents on the correct recycling procedures. It is recommended that landlords record the location, type and frequency of fly tipping incidents in order to develop a proactive response to the environmental and social consequences fly tipping causes.

Water

It is becoming ever more important to introduce water-saving measures as the changing climate and housing pressure increase the risk of water stress nationally.

As with most landlords no independent assessment has been made of water efficiency in Catalyst's stock. Therefore, the SHIFT water efficiency estimator tool has been used. The estimator predominantly uses build age data and refurbishment data for Decent Homes upgrades. Data provided by the Sustainability Officer indicated that 58.9% of properties were constructed since 2001 so the installation of dual flush toilets was assumed for these properties. Build dates were consulted to estimate that 40.9% basin taps, baths and showers were water efficient. 66.47% of Catalyst's homes are flats which do not use water for external purposes which was captured in the tool. This gave a result of 131.2 litres per person per day (lppd) using the SHIFT water efficiency calculator tool. Catalyst are close to achieving the long-term water efficiency target, so it is recommended that in order to meet this target and then maintain performance, Catalyst should work with water companies who offer free water efficiency visits to homes. Other SHIFT landlords have had thousands of water-saving devices installed at no cost to the resident or landlord.

Below you can see how this compares with the SHIFT network and science-based targets.



Water consumption for housing stock (litres per person per day – calculated using SHIFT calculator)

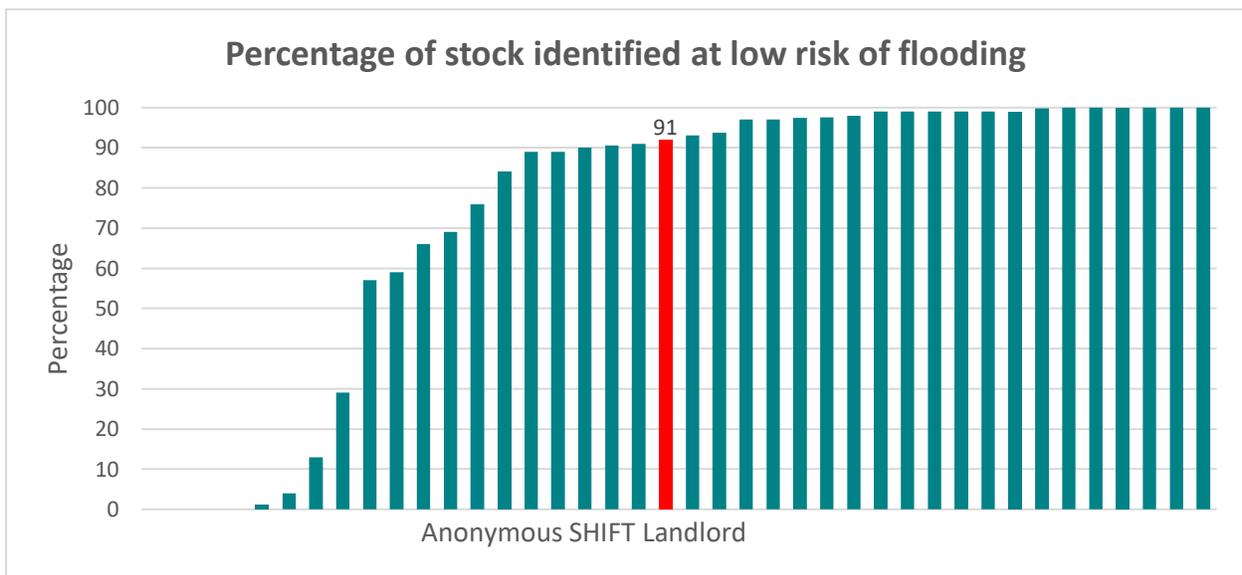
Homes at risk of flooding and overheating

As climate change intensifies and extreme weather patterns become ever more common, the resilience of your business and stock is increasingly important to consider. This is experienced most directly through the flooding and overheating risk of housing stock and offices.

Data from Catalyst’s 2018 SHIFT assessment was provided for flood risk using insurance claim information which was used to estimate that 91% of homes are at low risk of flooding. It is especially important in urban areas that the GIS work carried out to identify flood risk also includes surface water run-off as well as fluvial and tidal as it is projected to be the most likely form of flooding. Using information from insurers may only project flooding for 1 year and not the next 30 years which is more useful for planning and give a more robust sense of the long-term flood risk to your housing stock.

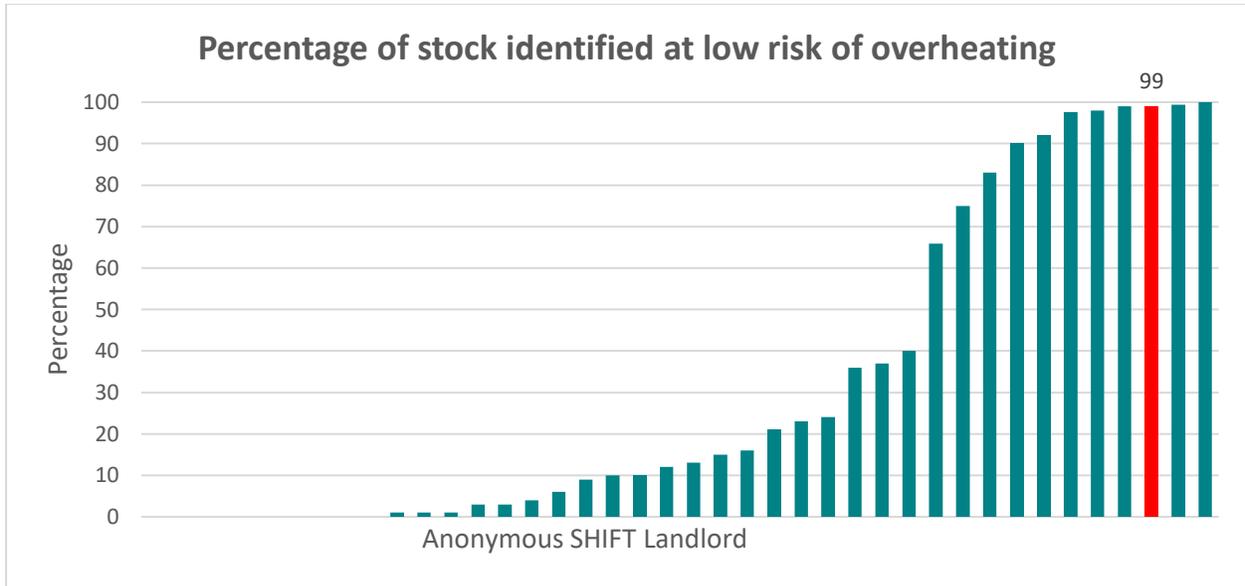
Information provided by the Sustainability Officer evidenced using CROHM overheating risk assessments has shown 99% of homes to be at low risk of overheating. However, further analysis will be needed as CROHM overheating risks are based on historic summer temperatures. In order to prepare for a warmer climate, we need to use projected summer temperatures. Met Office central projections are for a 2°C rise in summer mean temperature.

Building in low flood areas, building flood resilient housing, signing up to early flood warnings and having response mechanisms in place are all ways in which landlords have dealt with flood risk.



Percentage of stock for which a flood risk assessment has been carried out, and which have a low risk of flooding

It is recommended that Catalyst ensures that the overheating risk assessment includes projected summer temperatures (central estimate for 2050) and the risks associated with communal heating (hot service pipes in corridors). This will give the most accurate risk. It is also recommended that any refurbishments that involve fabric upgrades are assessed for overheating.



Percentage of stock for which an overheating risk assessment has been carried out, and have a low risk of overheating

Climate predictions herald shorter bursts of higher-intensity rainfall, which affect the way that existing water-processing infrastructure will cope. Green roofs and SuDS (Sustainable Drainage Systems) are ways of reducing surface water runoff and combatting flooding events.

As hot dry periods become more of a feature of British summers, excess summer deaths are set to rise, and overheating risk assessments are becoming more and more important, particularly where older residents are likely to be living. As temperatures rise outside, the home can provide a refuge, but if the building retains heat there is nowhere to go for some vulnerable residents. Landlords with an understanding of their at-risk homes are better prepared for hot weather events.

Climate resilience – what’s next?

It is recommended that you carry out an assessment of your stock’s overheating risk. This can be conducted using SHIFT’s overheating factor checklist and will take into account projected temperature changes in future. Suss Housing can provide advice on this, and contact details of other means of assessing this.

Include flood and overheating mitigation strategies, such as SuDS, cross-ventilation and solar shading, in specifications for new builds.

In the longer term, develop a programme for retrofitting existing stock with low-regret adaptation measures for overheating and flooding, such as blinds and shutters and increased vegetation where feasible.

Ecology

Access to green spaces and biodiversity can deliver major benefits to our health and wellbeing. These include air quality improvement, flood attenuation and cooling during heatwaves. SHIFT estimates the biodiversity value of the green spaces managed by Catalyst, which in turn leads to proportionally higher social value.

In the absence of any detailed data, Catalyst has used the SHIFT defaults which approximates an equivalent of 7.6% of land “protected”. The UK has a target of 17% of land to be “protected” by the end of 2020. For SHIFT purposes the “protected” status is equivalent to high biomass values (e.g. woodland). Areas of lower biomass (e.g. mown areas) can still contribute to the overall figure. Clearly, hard paved areas do not contribute. There is some indication that higher levels of biomass correlate with higher levels of biodiversity.

In any case the data provided shows that Catalyst could improve its green spaces and biodiversity figure. Initially it is suggested that better data is collected, this could be achieved by commissioning a GIS-based project for mapping out the size of land types owned by Catalyst. If this still does not produce 17% protected then physical improvement in biodiversity should be considered to provide the eco-services associated with green spaces.

Supply Chain

Maintenance fleet

Carbon emissions from home maintenance activities were based on the annual mileage of contracted maintenance fleets as well as carbon emissions embodied in other business areas. Carbon is measured per home managed and indicates the efficiency of maintenance travel. Although this will depend partially on the distribution of stock, there are measures that can be taken to reduce fuel costs by switching to a smaller or an electric fleet, providing training on fuel-efficient driving practices. Your performance is shown below.

Data from the supply chain survey showed that an estimated 158,569 litres of fuel had been consumed in the last 12 months on behalf of Catalyst. For contractors who were unable to provide mileage or consumption data, CO₂ emissions were estimated based off contract values. Using standard DEFRA conversion factors alongside contract value estimates, this equates to 648 tonnes of carbon emissions or 46.2 kgs CO₂ per home managed.

It is recommended that Catalyst require major contractors to respond to environmental surveys as in this assessment, some data required lengthy communication to be obtained. As well as a strong environmental case, there is a financial business case for doing so and other landlords have made it a requirement. Vehicle tracking, benchmarking and efficient driver training can make a great effect. In addition, some areas of maintenance could lend themselves to electric vans and experiments should be encouraged.



Carbon emissions from maintenance fleet, kilograms CO₂ per home managed

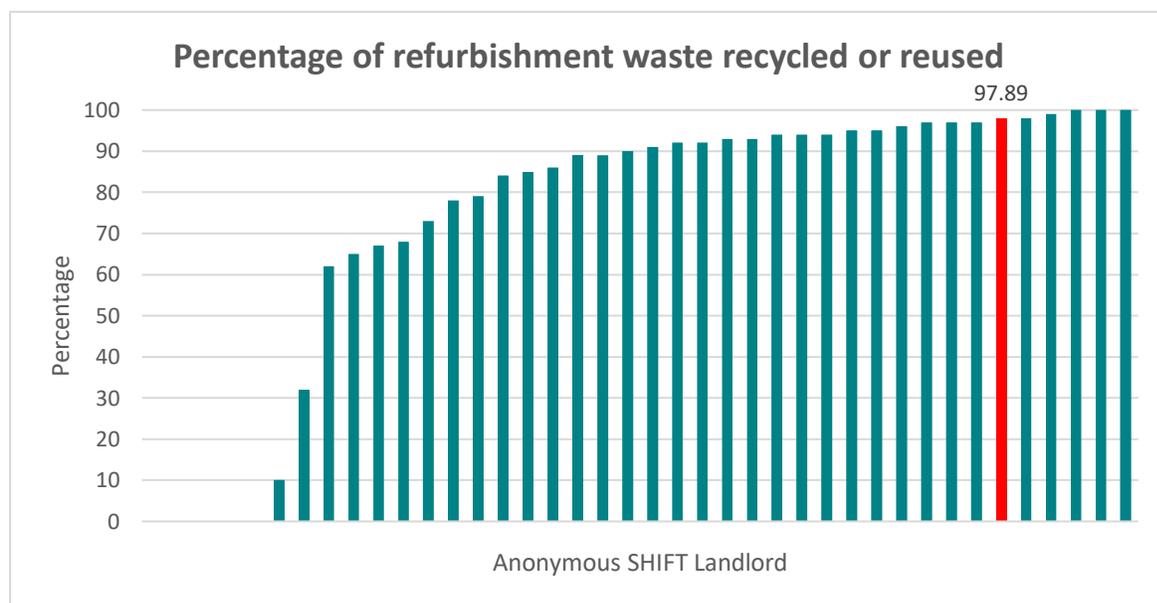
Transport improvements – what's next?

A significant part of the hidden costs of routine maintenance is travel, so efficiencies by the contractor in providing the correct vehicle with an operative and the correct parts on board – can help to make useful savings. Procurement contracts can include this, along with service level agreements on waste and recycling.

Refurbishment recycling

Detailed breakdowns of waste treatment are normally available from contractors and DLO's. Good reporting and recycling practices should be factored into the decision-making when contractors are selected.

Catalyst's were estimated to have an 97.89% recycle rate from refurbishment stock. Some information was provided by contractors to evidence recycling performance, but the majority of data was unverified. When contractors are responsible for their waste disposal, they are legally bound to provide detail on waste disposal, so it is recommended that Catalyst push to retrieve further information for SHIFT 2020.



Percentage refurbishment waste recycled

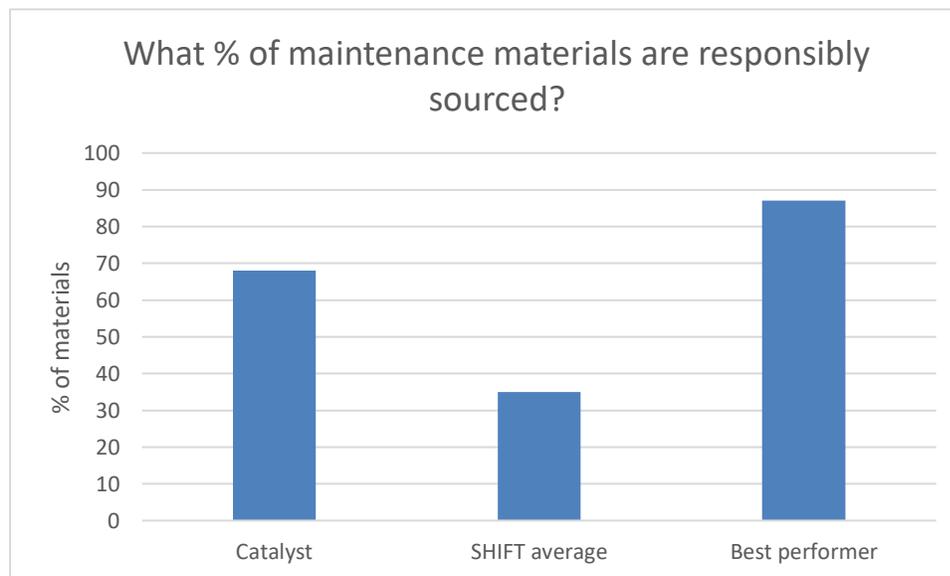
Waste reductions – what's next?

A surprising amount of what gets thrown away is brand new and still in its packaging, so clever purchasing and procurement can save expenditure. When waste disposal is managed by contractors, there is a legal responsibility for the originator to be clear on how disposal is conducted – as well as a financial cost, particularly for anything that ends in landfill. Less spent on waste means more spent on improving homes.

Maintenance materials

Housing providers can influence sustainability beyond their own organisation by engaging with suppliers and using their purchasing power to encourage best practices. Responsible sourcing practices were assessed for maintenance products, including pesticides, cleaning products and building materials, as well as office consumables.

Catalyst were estimated to have 68% of their maintenance materials responsibly sourced. Catalyst's Estates Team confirmed that all window and roof replacements are specified to a BRE Green Guide A rating and that paint solidifiers are recycled back to manufacturer. Information was not available for the responsible sourcing of cleaning products or alternatives to herbicides and pesticides. Responses by contractors to the environmental survey were positive with some contractors evidencing that the majority of the materials procured have achieved the BRE standard BES 6001 which validates products have been made with constituent materials that have been responsibly sourced. Many contractors didn't provide any further explanation for their 100% responsibly sourced figure, so this data has been scaled back to 70% due to lack of evidence. It is recommended that Catalyst aims to extract more information from their supply chain in SHIFT 2020 to increase the confidence in their environmental performance in this area.

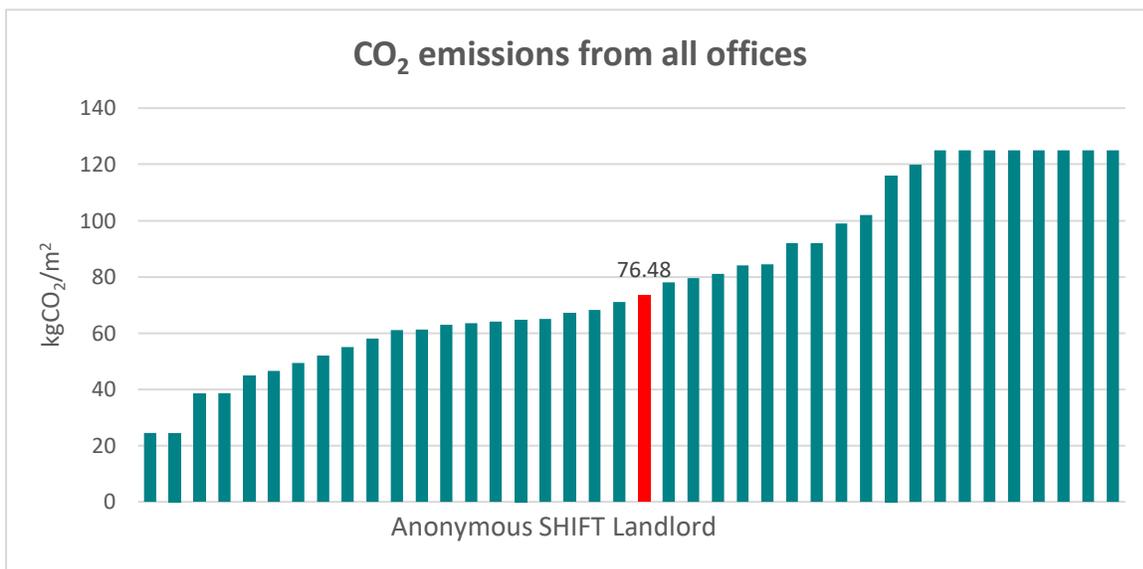


Offices

Tackling office energy usage will affect your organisation's bottom line by reducing operational costs and carbon emissions.

Data was collected by the Sustainability Officer which enabled a calculation of Catalyst's office emissions. In total, just over 496 tonnes were emitted in a 12-month period which equates to 76.48 kg CO₂/m² of office space. The vast majority of consumption was attributed to Catalyst's head office however it has emitted 90.81kg CO₂/m² reflecting its 'E' rating for energy efficiency. It is recommended that Catalyst work towards obtaining more accurate and accessible data for gas and electrical consumption for Ealing Gateway as this will be the first step for improving the energy efficiency of this office.

The chart below shows how this compares to other SHIFT landlords' office energy use. The target for offices is 25kg per m² of office space – this represents an 80% reduction on 1990 levels of UK energy use for offices.



All office energy use - calculated as kilograms of carbon dioxide, per square metre of office space

Business mileage

Controlling business mileage expenditure can make a real difference to landlords. The SHIFT metric for business mileage looks at car claims, public transport usage and air miles (if applicable).



Carbon emissions from business travel, kilograms CO₂ per home managed

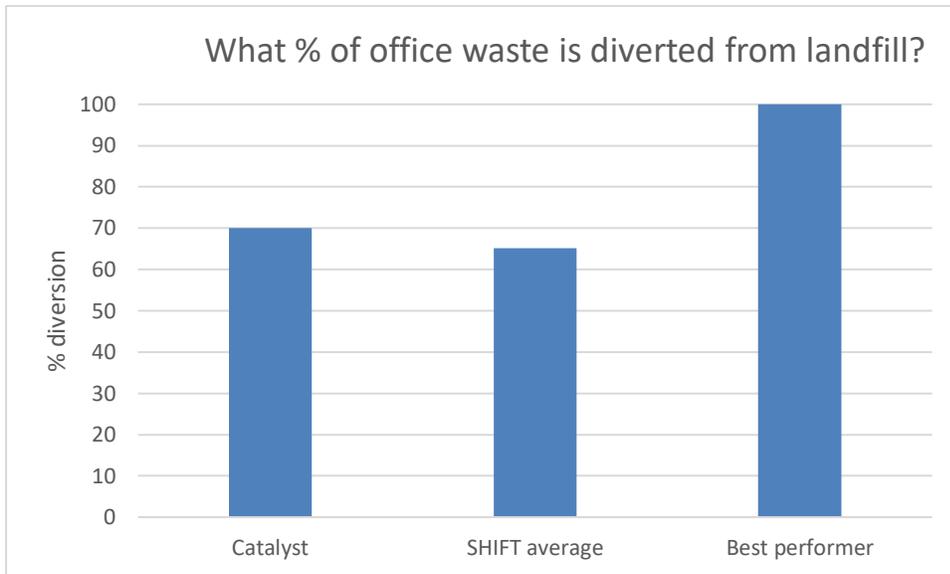
Total emissions for business mileage were just under 140 tonnes or 10 kg CO₂ per home managed. Catalyst benefits from having a significant portion its housing stock in close geographic proximity alongside the excellent public transport infrastructure available so improvements in this area should be achievable. With Catalyst road mapping to 'net-zero' carbon by 2050, beginning trials with hybrid or electric pool cars would begin to assist in achieving this target as well as expanding the number of employees cycling to schemes instead of driving.

Waste

As interest rises in the circular economy, alongside awareness of the damaging impacts of plastic pollution in particular, companies from all sectors are ramping up efforts to tackle waste. Quantifying total waste outputs and treatment is an important first step.

The waste generated by Catalyst's office-based employees was 36 tonnes (59.3 kgs per employee) in the last financial year. Excellent waste data was provided for Catalyst's head office, but for Catalyst's remaining offices data was not available so estimates using SHIFT defaults were used to estimate total waste. It was confirmed that all waste is diverted from landfill at Catalyst's head office, but Grundon Waste Management collect waste from various other Catalyst offices and no data was available. With no complete data for office waste, recycling rates were estimated to be 70% using SHIFT average values. Catalyst may find it helpful to use the same waste management company across the organisation. If this is not possible, looking into implementing a system where office waste weight and type is recorded before it departs a facility could be an option.

The chart below shows how your office waste treatment compares to the SHIFT landlord average.



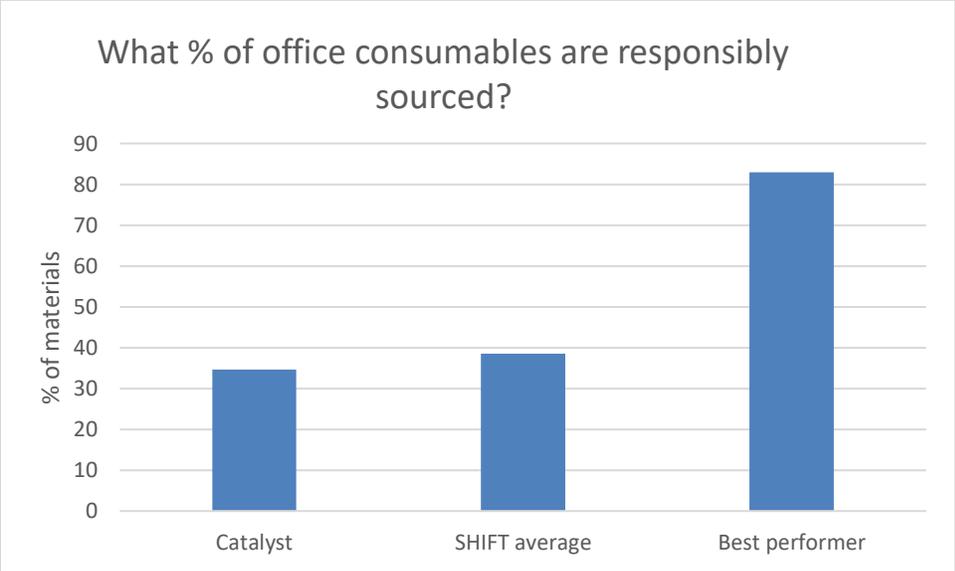
Percentage of office waste not destined for landfill (e.g. Recycled, re-used, or used for energy generation)

Waste reductions – what's next?

As the first of the 3 Rs is 'Reduce' (reduce, re-use, recycle) – the first step in waste management is simply to buy less. Reduce the need for purchasing new stuff, for example by buying less paper and envelopes increasing the switch to electronic mail; or repurpose furniture and fittings too, by building relationships with local recycling initiatives.

Office consumables

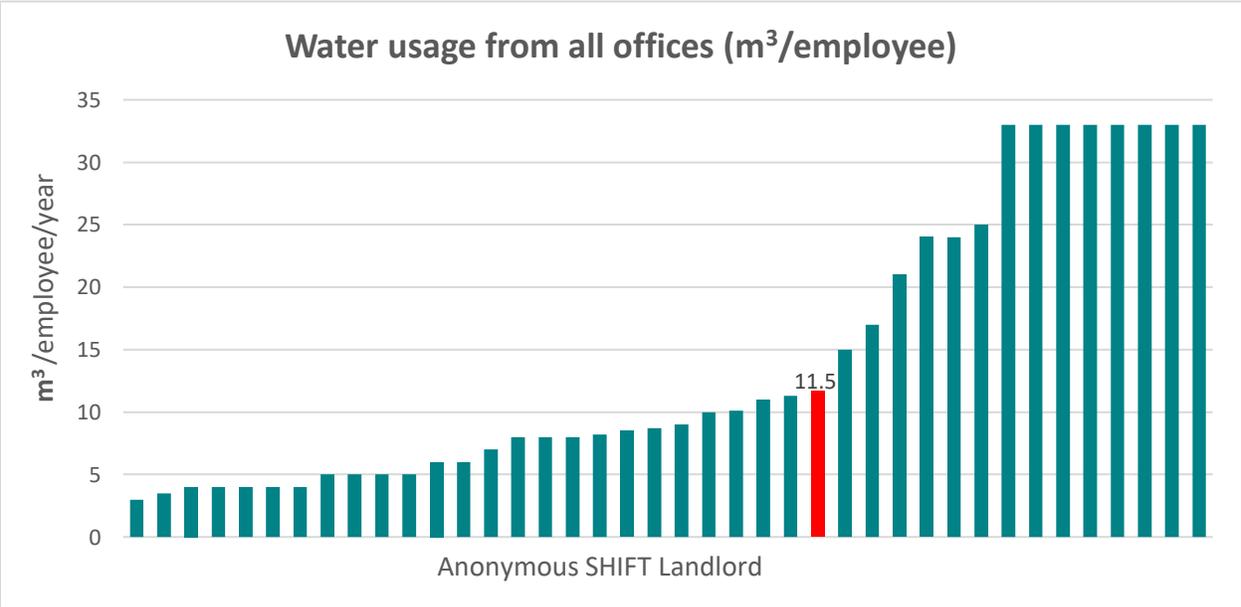
The Sustainability Officer at Catalyst sourced excellent data for office consumables from their supplier in the form of quarterly environmental spend reports. These reports provided information of 'green' spend and indicated that 34.7% of purchases were responsibly sourced. This figure has been used for this SHIFT assessment.



Responsible sourcing of office consumables

Water

Utility data collected by the Sustainability Officer demonstrated that 6769 m³ of water were used by Catalyst office employees in the last financial period. This equates to 11.5 m³ per and is a relatively high usage. A review of usage may highlight water and cost savings as it was noted that consumption had gone up significantly at Catalyst’s head office compared to their previous SHIFT assessment. Ideally Catalyst should be aiming for 3m³ per employee by 2030. The chart below shows how Catalyst ranks against other SHIFT landlords.



Office water use per year (m³ per employee)

Offices at risk of flooding and overheating

The Sustainability Officer analysed Environment Agency Flood maps for their office and found that whilst it was in a low risk for fluvial and tidal flooding, there was a risk of surface water flooding on the roads surrounding Catalyst's head office. Whilst the office itself is at low risk of flooding, Catalyst may want to draft a flood action plan for its office in the event that its accessibility is prevented by flood waters.

A survey of the office conducted by Catalyst revealed a low risk of overheating due to air conditioning system, dual aspect building design, electrical heating which prevents standing losses.

Summer temperatures are projected to rise which will exacerbate existing conditions. From an energy efficiency standpoint, passive cooling systems (e.g. brise soleil, reflective windows) are recommended, but lower energy air conditioning is also available.

New build

When building new properties, it is crucial to take a long-term perspective to ensure they are future-ready for carbon reduction targets and climate change. Despite the loss of the Code for Sustainable Homes, guidelines and voluntary standards are still available and can be used to ensure that new properties are built to extremely high sustainability standards.

Energy efficiency is an important part of the score awarded in this new build section. Compliance with current Building Regulations generally results in new homes reaching a SAP score above 80 (EPC level B). At the same time, emissions targets for 2050 imply that ALL homes in the UK should be at an average of 86 by then. In other words, to reach that target developers should aspire to build to zero-carbon standards now.

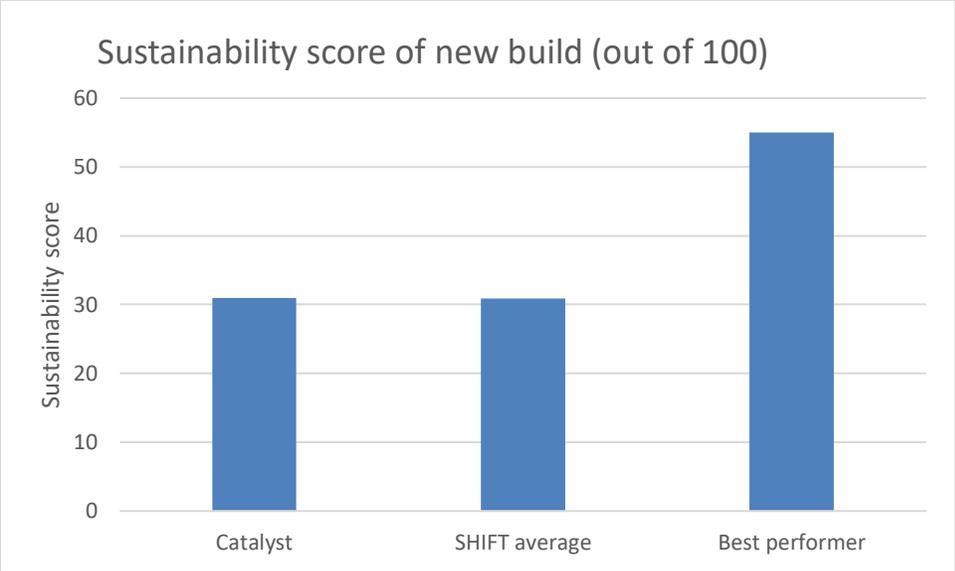
As well as energy efficiency, the SHIFT metric factors in a range of measures to determine the sustainability of new builds, including energy efficiency, ecological enhancements and sustainable transport support.

Figures provided for this assessment by Catalyst's Sustainability Manager indicate that all new homes complied with building regulations energy requirements. In 2018/19 Catalyst built 563 new homes with an average SAP on 84.85. Specifying a minimum EPC Grade (e.g. "A") or SAP rating (e.g. SAP 86 minimum) will help Catalyst bring up its average energy efficiency closer to environmentally safe levels. All new homes do receive a good range of additional sustainability measures such as internal recycle bins, ecological enhancements and cycle storage. Catalyst also documented that the responsible sourcing of construction materials and the completion of overheating risk assessments were mandatory in their Employer Requirements.

No third-party verification is routinely carried out post-construction which runs the risk that designed environmental features may not be present in the as built home, the so called "performance gap".

Using the SHIFT calculator for new build and the data above, the sustainability score for Catalyst's new build homes was 4.61 out of 15. This can be improved by building to higher SAP ratings and additionally, introducing independent third-party verification will help close the performance gap. Audits such as Post-Occupancy Evaluation, PassivHaus or HQM can help. Catalyst may also choose to devise its own methodology of third-party verification.

The graph below shows how Catalyst's new build sustainability compares to other SHIFT landlords.



Sustainability percentage score of recent new build housing (last two years)

Sector overview

Overall, we have seen encouraging progress made by our SHIFT landlords over the last year. The energy efficiency of SHIFT landlords' stock continues to outperform the social housing sector average, while data collection and granularity is continuing to improve steadily for most areas.

The following sections particularly stood out in terms of progress made and opportunities for improvement:

Sustainability Strategies - It is especially encouraging to see a rise in SMART target setting within sustainability strategies. This underpins substantive, measurable action, so we anticipate an increase in quantified projects and improvements in future.

Sustainable transport options - There is still plenty of room for improvement on sustainable travel initiatives, so this is an important area for landlords to focus attention. The rise of electric vehicles offers an opportunity to refocus attention on the ways that the built environment can foster a culture of healthy, low-emission travel. Infrastructure that supports walking, cycling and public transport can be a fantastic way to reduce emissions and promote resident wellbeing.

Responsible sourcing – there was great variety in organisations' levels of responsible sourcing for both office and refurbishment materials. Specifications requiring sustainable, ethically sourced products, and collaboration with suppliers to improve their environmental practices are key ways of extending your sustainable footprint beyond the direct assets and operations of the organisation.

Ecology – The natural capital metric has been reworked for this year's SHIFT assessment in order to capture the full extent of housing providers' ecological enhancements. While there is still plenty of scope for increased development of green spaces and biodiversity measures, it is good to see green spaces being measured and valued.

SHIFT landlords work hard to reduce environmental impacts. The SHIFT assessment displays and celebrates this work and gives the chance to take stock and plan for further improvements. It also tries to challenge housing associations to push boundaries and go beyond comfort zones when it comes to sustainability. This is an exciting time, with the emergence of electric vehicles, battery storage, and better recognition of biodiversity benefits and climate adaptation requirements, to name just a few areas. SHIFT landlords must make the most of these opportunities if they are to be truly sustainable organisations.

This is not an overnight process and improvements can take a long time to mature. However, we need action now to deliver a sustainable and affordable social housing stock in the future, and SHIFT landlords can play a central role in achieving this goal.

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