

# Environmental Strategy 2021-2025



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# Glossary of Terms

**Net zero** - Net zero refers to the balance between the greenhouse gases produced and the amount removed from the atmosphere. Net zero is achieved when the amount added is no more than the amount taken away.

**Science-based targets** - An emissions reduction target developed in line with the scale of reductions required to keep global warming below 2°C from pre-industrial levels.

**Scope 1, 2 and 3 emissions** - The Greenhouse Gas Protocol (GHG Protocol) has defined three scopes of emissions. The scopes correlate to who 'owns' those emissions and the level of control applicable to changing those emission levels at each stage. Scope 1 and 2 emissions relate to systems that are within reasonable control of an entity, such as onsite and purchased energy. Scope 3 emissions are from sources that are more external to a specific organisation, such as from the supply chain. For housing associations, this includes energy used within homes.

**SHIFT** - An independent environmental audit system, which monitors a housing association's environmental performance across all areas of the business. An annual rating of Commended, Bronze, Silver, Gold or Platinum is provided as part of the audit.

**Energy Performance Certificate (EPC)** - An Energy Performance Certificate provides an indication of how much it costs to provide heating, hot water and lighting to a building.

**Standard Assessment Procedure (SAP) rating** - A calculation of a building's energy use and energy cost per m<sup>2</sup> of floor area. This rating is used to produce an Energy Performance Certificate and is usually between 0 and 100; however, the rating can exceed 100 where renewable technologies are used.

# Foreword

As one of the UK's leading social housing providers, our Vision is for everyone to have the opportunity to have a place that they can call home. This runs parallel to our commitment to do the right thing for our customers and the environment.

We believe our customers' homes should be warm, comfortable and affordable to run.

We are proud of the work we have undertaken since the launch of our first environmental strategy in 2019. This includes sponsoring research by the Institute of Public Policy Research (IPPR) and being involved in innovative projects such as the Energy Superhub Oxford. Since our first strategy, the UK Government has also committed to becoming net zero by 2050, raising the profile of environmental issues. Residential housing stock contributes around 14% of the UK's total greenhouse gas emissions.

As we own and manage around 34,500 homes across England, we have a role to play in supporting the nation's drive to achieve net zero. Furthermore, the Covid-19 pandemic has accelerated changes to the way we and our partners work, with Stonewater shifting to a hybrid working model. This approach will allow us to reduce our emissions from our offices and business travel.

The Government recently published its Net Zero Strategy and its Heat and Buildings Strategy leading up to the UK hosting COP26. While we have a good understanding of and are rolling out low carbon technology, to date this has focussed on off-gas areas. The Heat and Buildings Strategy recognises this 'no regrets' approach as the right thing to do.

The strategy also sets an ambition to phase out the installation of gas boilers by 2035; however, the range of technologies that will be used to achieve this is still to be determined. Stonewater is keen to work with Government using our experience to shape policy and regulation emerging from the Net Zero and Heat and Buildings Strategy.



The pandemic has also meant greater financial hardship for many individuals and families across the UK. For some, this means difficulty covering basic costs and potentially suffering from fuel poverty. We are determined to ensure our decarbonisation plans improve the lives of our customers resulting in comfortable and affordable homes. We do not just want to improve existing homes and build net zero new homes. We want to take a holistic approach including enhancing open spaces to encourage greater biodiversity, creating places and communities that our customers are proud to call home.

**Nicholas Harris**  
Chief Executive



# Introduction

Stonewater's first environmental strategy was launched in 2019. Stonewater has already achieved improvements in performance and received recognition across the sector. This strategy establishes a plan for Stonewater to work towards achieving net zero by 2050.

Since the launch of our first environmental strategy, we have:

- > Achieved a silver SHIFT rating in our first year
- > Upgraded our IT data centres, reducing emissions by two-thirds
- > Installed heat pumps in more than 1,000 homes
- > Demonstrated the potential of smart energy systems
- > Assessed the risk of flooding & overheating for our properties
- > Funded the planting of five trees for every home we build and one tree per home on site
- > Stopped the use of fossil fuel heating on land-led development sites
- > Become early adopters of the Sustainability Reporting Standard for Social Housing
- > Launched a Sustainable Finance Framework and issued our first sustainability bond securing £250m.

In the past two years, climate change mitigation has become a global emergency. Stonewater is committed to supporting the UK Government's plans to achieve net zero carbon emissions by 2050. At the heart of this strategy are Stonewater customers. It is imperative that alongside decarbonising our homes, we ensure they are comfortable and affordable, while remaining safe and secure.

This strategy will help to improve the communities in which our customers live, through enhancing open spaces and providing greater biodiversity, green transport and encouraging community cohesion.

We will do this by:

- > Improving the energy and water efficiency of our existing homes and developing a net zero standard for new homes
- > Understanding how customers use energy and creating homes and places that meet their needs
- > Understanding the impact of constructing and maintaining our homes and developing reduction targets
- > Adopting a hybrid working model to reduce the environmental impact of our offices and business travel
- > Measuring and monitoring our impact, enhancing our environmental, social and governance (ESG) credentials.

By focussing on these key areas, we will meet the diverse needs and aspirations of our customers. We will manage our resources efficiently and effectively to maximise the return on our assets, allowing us to invest in new and existing homes.



# Existing homes

Our homes are our most significant impact upon the environment. Improving the energy efficiency of our homes will also improve the lives of our customers. In 2020, we sponsored research by the Institute for Public Policy Research (IPPR) into decarbonisation of homes in England. Stonewater has also undertaken modelling and developed a plan to improve existing homes to reach net zero by 2050.

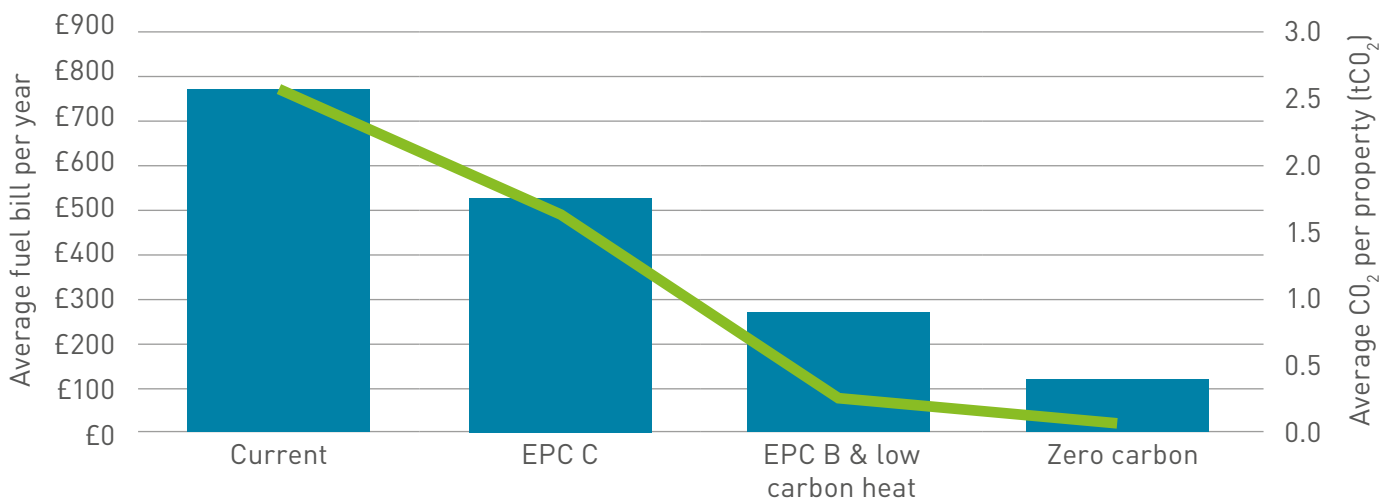
Ensuring our homes are affordable for our customers is imperative and we will set running cost and decarbonisation targets. We have discussed our work with Government and represented the sector to help inform policy and drive the retrofit agenda.

Figure 1 illustrates the running costs and CO<sub>2</sub> emissions of homes of different energy efficiency standards. This resulted from Stonewater's plan to improve all homes to achieve net zero by 2050. The EPC Band C target requires £45million of investment, which is in progress. However, much greater investment is required to achieve higher standards.

The investment required to reach EPC Band B with low carbon heating equates to £250m above planned investment, whereas to achieve zero carbon £500m above planned investment is needed. Achieving EPC Band B and net zero will require greater financial support from Government and for the cost of retrofit to reduce.

Up to 2025, we will focus on installing low carbon heating in off-gas areas alongside fabric improvements. At this point, we will review the pathway for decarbonising homes with gas and begin the transition; we expect this to focus on electrification of heat.

Figure 1. Comparison of running costs and CO<sub>2</sub> of modelled performance targets (based on September 2021 figures)



# Existing homes

After



Before



## Our ambition:

- > All homes will meet a minimum of EPC Band C by 2030, resulting in a reduction of 8,000 tonnes of CO2 per annum (Scope 3). See Appendix for more detail.
- > All homes will meet a minimum of EPC Band B and have low carbon heating by 2040, resulting in a 90% reduction in CO2 emissions from a 2020 baseline
- > Mitigate the risk of overheating in homes alongside retrofit works
- > All 'hard to treat' homes will have a plan to invest, redevelop or dispose by 2025.
- > Improve the efficiency of communal heating and plan the transition from gas to low carbon systems
- > Improve the energy efficiency of communal areas to reduce energy service charge costs for customers
- > Deliver smart controls and technology to reduce energy usage
- > Roll out electric vehicle charging facilities by 2030
- > Improve biodiversity on our existing schemes trialling scalable projects
- > Achieve a year-on-year reduction in fly-tipping.

# New homes

It is important that Stonewater develops net zero new homes that are comfortable and cost effective for our customers. Despite the Government's plan to launch the Future Homes standard in 2025, we recognise that, to avoid the need for costly retrofit and disruption to customers, the best option is to build net zero new homes as soon as possible.



Our ambition:

- > Develop a net zero standard land-led new homes and a retrofit-ready standard for S106 schemes by April 2022
- > New developments will meet the above standards by April 2025 onwards
- > All new land-led schemes will have low carbon heating
- > Overheating will be part of our net zero standard
- > Trial different approaches to delivering low carbon homes
- > Standardise components across our new and existing homes for efficiency and improved customer experience
- > Plant five trees for every home that we build, plus one on site for each home
- > Utilise edible planting on our new developments
- > Include infrastructure for electric vehicle charging in all new schemes
- > Provide spaces for home working in our new homes to enable home working to minimise environmental impact.

## Water

Water is a finite resource and is becoming scarcer within the UK as we build more homes. Additionally, more extreme weather and temperature rises caused by climate change are likely to put additional strain on water supplies in the UK. Some local authorities are already setting requirements for water neutrality. This means that the water usage of any new developments must be offset by water efficiency measures within existing buildings.

Our ambition:

- > Water efficiency will be included in of our net zero standard for new homes
- > Calculate the average water consumption of the new homes that we build
- > Achieve water neutrality for new homes by reducing consumption in our existing homes
- > Incorporate sustainable urban drainage on new homes where possible
- > Deliver water saving advice to customers.



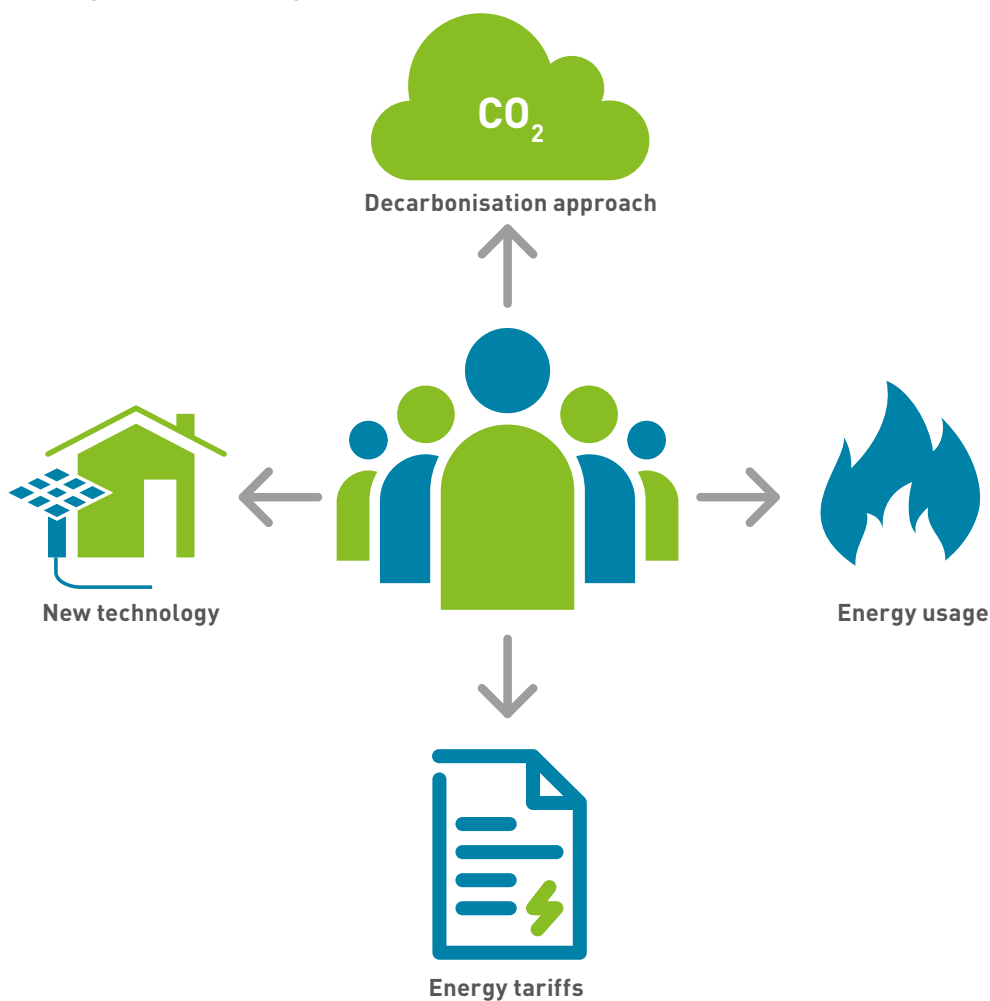
# Customers

While we work hard to reduce our environmental impact, a key outcome of this strategy will be to improve our customers' experience. We will aim to reduce the running cost of our customers' homes. However, the decarbonisation of heat risks an increase in running costs. Therefore, it is imperative we co-create a holistic approach, ensuring that our plans benefit our customers.

We will work with customers to understand how they use their homes, ensuring technology is intuitive to reduce energy consumption. We recognise that some customers may still struggle to afford to heat an energy efficient home. Therefore, we will support customers to use their homes efficiently and access the lowest cost energy and any other grants or discounts.

Our ambition:

- > Understand how customers use their homes to inform our plans to improve their energy efficiency
- > Understand customers' experience of new technologies and different approaches to energy efficiency to inform future plans
- > Involve customers as we develop our approach to building net zero new homes
- > Support customers to live more efficiently in line with our Fuel Poverty strategy
- > Support customers to access the best value energy tariffs
- > Innovate to identify ways to keep electricity supplies affordable
- > Work with Government to incentivise decarbonisation at no detriment to consumers.



# Partners and supply chain



To achieve our ambition of decarbonisation, we must collaborate to understand the impact of our supply chain. As part of our environmental management system, we already engage with our contractors to measure the carbon footprint of maintaining our homes. However, we must establish the whole lifecycle impact of the products that we buy. In early 2021, we established an environmental working group for our partners to share knowledge and best practice.

This group also provides an opportunity to influence the supply chain by engaging as a collective. We are also establishing partnerships with organisations that have similar ambitions to reduce their impact. As we begin new relationships with other organisations, it is important that they share our vision to improve environmental performance.



Our ambition:

- > Share best practice and improve performance through our partner environmental working group
- > Implement a sustainable procurement policy
- > Collaborate to obtain improved data from suppliers on the responsible sourcing of materials
- > Begin to measure our Scope 3 carbon emissions from products we purchase
- > Use partnerships to provide customer support on energy and identify efficiency measures
- > Encourage our partners to opt for electric vehicles.

## Plastics

Single use plastic creates a huge problem for the environment. The majority of plastic cannot be recycled within the UK and is transported abroad for recycling. However, much of the plastic that leaves the UK does not get recycled and often ends up in oceans, harming marine life. Likewise, littering of plastic waste creates further damage to ecosystems on land and in water. This results in micro plastics entering the food chain, which damages the health of wildlife and humans alike.

Our ambition:

- > Reduce single use plastic used in the construction and maintenance of our homes by 50% by 2025
- > Encourage the sector to develop a consistent standard to measure plastic consumption and set targets for reduction
- > Initiate a research and development project to identify sustainable alternatives to plastics in construction
- > Carry out whole lifecycle assessments of our main contributors of plastic and compare with alternatives.

# Corporate impact



The pandemic has accelerated the use of technology to reduce our environmental impact. While we will maintain some office space in our hybrid working model, this will be reduced. Alongside remodelling our offices as collaboration hubs, we will maximise opportunities to make them more efficient.

Our ambition:

- > Reduce our office emissions by 33% compared to a 2019-20 baseline
- > Reduce our business travel emissions by 80% compared to a 2019-20 baseline
- > Improve measurement of office waste and set targets for diversion from landfill
- > Embed environmental sustainability throughout the business and provide relevant training for colleagues.



# Communication

We recognise that we will not achieve our environmental ambitions without successful communication. It is important that we work with our customers as we plan to improve their homes, ensuring they recognise the full benefit of works.



We must also inspire customers, colleagues, partners and peers to reduce their environmental impact.

We will:

- > Produce an annual communications plan to cover internal, customer and sector communications
- > Regularly review and update information provided at key stages of our customer journey
- > Develop a suite of case studies to illustrate our retrofit projects
- > Report our progress to all colleagues and inspire them to take part in environmental initiatives
- > Utilise our partner environmental working group to share information and encourage collaboration
- > Run seasonal campaigns to provide support to customers on environmental issues
- > Seek opportunities to promote our achievements externally.

# Environmental management, strategy delivery and reporting

Stonewater has an Environmental Management System (EMS). Its purpose is to measure and monitor our performance and ensure continual improvement. In measuring our performance, we have been able to calculate our Scope 1 and 2 emissions and some Scope 3 emissions. We recognise the importance of measuring and reducing Scope 3 emissions and will work with our partners to understand better our impact in this area. Progress against an action plan will be monitored and reported on quarterly.

We will:

- > Report our Scope 1, 2 and 3 emissions annually
- > Develop science-based targets for carbon emission reductions
- > Achieve a SHIFT Gold rating by April 2022
- > Review progress on the delivery of this strategy quarterly using an action plan
- > Review and update this strategy annually to ensure it remains up to date.



## Conclusion

This strategy will put Stonewater on a strong path towards decarbonisation. By 2026, we will have reduced the number of homes with an EPC rating below Band C by over one third, with no homes below a SAP rating of 60. We will have rolled out low carbon heating in off-gas areas and be in a position to begin decarbonising heat in homes on the gas grid.

This will ensure we remain on track to achieve EPC B by 2040 alongside low carbon heating. Within the life of this strategy, we will be building net zero carbon new homes, mitigating any need for future retrofit. We will have commenced the rollout of electric vehicle charging infrastructure, making sustainable transport more accessible. For our customers, this strategy will mean more comfortable, affordable homes, surrounded by open spaces that support health and wellbeing as well as biodiversity.

# Appendix: Achieving minimum EPC Band C

## Low SAP properties

Stonewater has 343 homes with a SAP rating below 55 (EPC Band D). Of these 142 are programmed to receive energy efficiency measures during 2021/22. The tables below provide an insight into the characteristics of Stonewater's low SAP homes and an indication of the feasibility to upgrade the homes.

Region	Number of homes
West Rural	153
South West	124
South East	26
West Urban	25
East	8
North Central	7
<b>Grand total</b>	<b>343</b>

Heating fuel	Number of homes
Electric	261
Gas	64
Other	17
Communal	1

The majority of low SAP homes are in rural areas in the West and South West of the country. This is reflected in the main heating fuel of the properties, with electricity being the most common. For those homes that only require a heating upgrade to a low carbon heating system to achieve EPC Band C, the solution will be relatively straightforward. Where the properties also require further insulation to enable a heat pump, or where the property type is a flat, the level of investment required or technical complexities may be prohibitive.

It is likely that many homes with a rating below 55 can easily be improved within a reasonable level of investment. However, the homes that either require complex interventions or are not suitable for some measures will be reviewed in more detail. The options that will be considered will be to invest, redevelop or dispose.

# Appendix: Achieving minimum EPC Band C

## Investment to achieve EPC Band C

Figure 1 demonstrates the improved EPC rating profile between now and 2030. This chart includes the anticipated development of new homes. By 2025, almost 80% of homes will achieve a minimum of an EPC Band C and no homes will have a SAP rating below 60. From 2023 onwards all new homes will meet a minimum of EPC Band B and, as we move closer to 2025 and are building net zero new homes, more homes will achieve EPC Band A.

Figure 1. Revised EPC profile of Stonewater Homes between 2021 and 2030

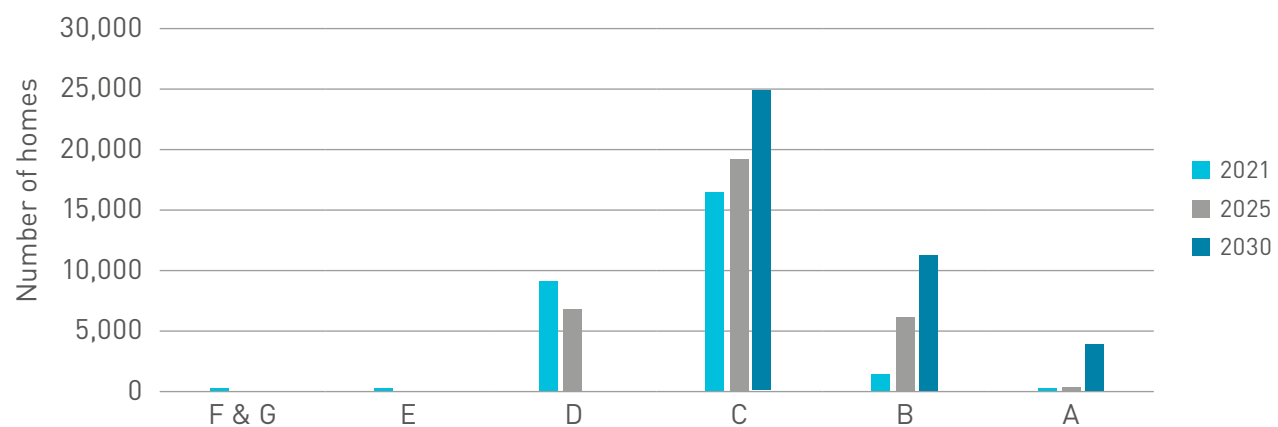


Figure 2 illustrates the measures required to improve all homes to a minimum of EPC Band C. After lighting, glazing is the most common measure, most of which is already planned for replacement due to age. The majority of the poorest performing homes are in off-gas areas and therefore require the installation of a heat pump. Due to approximately 85% of Stonewater’s homes being built after 1980, there is a limited amount of insulation work required. Of the properties that do require wall insulation, circa 500 of these have solid walls, which will be more complex and costly to insulate.

Figure 2. Breakdown of efficiency measures required to meet minimum EPC Band C

