### Announcer

Welcome back to another episode of *On the Air*, a podcast brought to you by Stonewater. Throughout season 4, we're bringing you 12 brand-new episodes that will explore 4 themes: the cost of living crisis, technology in housing, sustainability, and professionalism within the housing sector. Our host, Paula Palmer, will be joined each episode by a guest co-host as well as special guests to explore the latest insight and stories from across the social housing sector.

### Paula Palmer

Hello, and welcome back to Stonewater's *On the Air* podcast. This episode marks the first in our mini-series of podcasts exploring sustainability in the housing sector. Achieving our net-zero carbon ambition, benefiting both our customers and the environment, sits at the heart of every decision we make and every action we take at Stonewater.

In today's podcast, we'll be discussing the latest technologies and innovations that we're adopting to future-proof our homes and save our customers much-needed money on their energy bills. Today, our guest host is Adam Masters, who is the Assistant Director of Environment and Sustainability at Stonewater. Welcome to On The Air, Adam.

### Adam Masters

Thanks, Paula. Hi everyone. As Paula says, I'm Assistant Director of Environment and Sustainability. My role at Stonewater is to oversee all of our environmental work, but we've got a team of sustainability business partners who do the hard work. We've got six business partners that focus on different work streams from new homes, existing homes, customers, finance and ESG, water and ecology and sustainable supply chain. Then, alongside that, we've also got a retrofit delivery team. I oversee the work that we do in terms of retrofits to our existing homes to bring them up to modern standards as well.

### Paula Palmer

Thanks, Adam. It's great to be joined by one of those business partners you spoke about. We've got Rhys Bevan. Welcome, Rhys.

### Rhys Bevan

Hello. Thank you, Paula. Yes, I'm Rhys. I'm the business partner for Development. My role is to assist the wider Development team in reaching our sustainability objectives and adopting a pathway towards our net-zero from 2025 standard for all of our new land and build schemes. I also help find new technologies and new building methods for us to explore in order to help us get there and trial new pilot technologies or anything like that that helps us and our customers be more sustainable.

### Paula Palmer

Thanks, Rhys. We've also got one of Stonewater's Development managers, Arthur Gott, with us. Hi, Arthur.

### Arthur Gott

Hi Paula. Hi everyone. Yep, I'm Arthur, Development Manager in the east region, and I'm responsible for the delivery of a programme of development schemes within the region, ensuring a smooth handover to our New Homes Team to help with their sales and lettings service. Also, responsible for assisting the head of development in identifying and securing new projects in line with our regional growth targets.

### Paula Palmer

Fab. Welcome to the show, Arthur. We've got Emily Batchford, who's back with us again. She joined us on the very first episode of *On the Air*, season four. Emily is one of the Environmental Sustainability Business Partners in Adam's team.

### Emily Batchford

Yes. Hi, Paula. It's good to be back and good to be discussing such an important topic. As I've said in previous podcasts, I am the sustainability business partner for customer experience. I support customer experience with anything sustainability-related that they might need, any advice in that area, and then also any of our customer engagement in our sustainability work. That can be existing homes, new homes, how we engage and support customers in living greener lives, and living in homes that hopefully are more sustainable too.

### Paula Palmer

Thanks, Emily. Let's get going, Adam. Can you give us an overview of what a sustainable future looks like for Stonewater and our customers?

### Adam Masters

Sure. Everyone's probably aware that the government has set a commitment for the UK to be net-zero carbon by 2050. Essentially, we won't contribute any carbon emissions to the atmosphere. Stonewater also committed to playing our part in that. Homes are one of the biggest contributors to carbon emissions, 17% of the UK's carbon emissions come from the UK's homes. It's important that we look towards a fossil-free future, so we're not using things like gas central heating to heat our homes, and we're using more renewable technologies and homes use less energy than they do currently, so we need to really well insulate those homes, make them nice and warm and comfortable for our customers.

Stonewater are looking at the standards we build to. And because we own and manage those homes for decades after we build our new properties, it's really important that we're building to the highest standard possible from the outset, so we're not having to go back to these homes and try and make them more energy efficient in future.

That's where Rhys comes in. I'm sure we'll talk about later in the show around the work that we're doing to make our homes more energy-efficient. Also, it's about sharing that information and knowledge and learning from others, so looking at new technologies, understanding how they work, how they impact customers' bills, and how customers use them.

But we really want to share that more widely across the sector as well, so this week, we also launched the Centre of Excellence in partnership with Greenoak, and that's a real opportunity for us to use monitoring within our homes and share information and learning from some of the projects that we're delivering and hoping that that can be used more widely across the sector, and we can use that as a platform to build on and improve the way we develop and build our homes in future.

### Paula Palmer

Fantastic. Thanks, Adam. That was a really interesting overview. Greenoak Centre of Excellence, as you introduced there, is bringing together key voices in the housing sector. Is that for everybody to share the learning or for us?

### Adam Masters

Yeah, that's right. As I said, we launched this week. It was a really successful event. We had a wide range of attendees, from housing associations to other developers or contractors. The purpose of the Centre of Excellence for Sustainability, sorry, is to share not just the work that Stonewater is doing but also good practise from others.

It's not just for Stonewater. It is for the sector and also for customers, so we're looking at ways that we can engage customers in sustainability and reduce our impact on the environment. How customers can also support us in terms of providing their insight, because they're the people that live within their homes.

We want to take a more collaborative approach, one with partners across the sector, but also our customers, that we're developing solutions that work for customers within their homes. It's an opportunity for anyone to share any learning, and we want it to be a real, honest view. Not just look at the fantastic work we've done. Everything was perfect. Aren't we brilliant?

It's actually about real learning. Holding our hands up, saying, actually, we tried this, and it didn't work, but the learning was XYZ. On the future projects, we can implement that learning, and others don't have to go through that same learning process. They can start from a more advanced position than they perhaps would have done if we hadn't been sharing that information.

### Paula Palmer

That sounds great. Listeners can find out more about the Centre of Excellence on our bonus episode, which we recorded at the event, where I was joined by Vicki March, Director of Development and Sustainability. She spoke about our partnership with Greenoak and about the Centre of Excellence. We were also joined by Claire Rainsford from the sustainability team at Stonewater. She talked about the circular economy, all about looking at how we remove waste from our processes. Adam, tell us some more.

### Adam Masters

Yeah. On the day as well, we spoke about some case studies and some of the work that Stonewater has been doing. But as I've got Rhys here, I probably won't go into too much detail on those. I don't know, Rhys, if you want to come in and talk around some of the technology that we've been using within our new homes?

### Rhys Bevan

Yeah, I certainly can. At Stonewater, one of the better things that we do is that we never shy away from piloting new technologies and new innovative methods for homes, both in the build structure and the technology that goes into them. One example of that is obviously our Wonderwall system, well, not ours, but the Wonderwall system that we put into our homes in Axbridge and a few other schemes.

Essentially, this is like a smart AI heating system. It learns how the resident lives and how they use their energy to tailor the most efficient usage for them. For one example is if the system starts to learn that you don't go into your living room until the evenings, it learns that there's no sense in heating the living room in the morning when it's not going to be used when you turn your heating on. It can go all the way from fully autonomous to customers can control it, every detail down on their phone. We've seen some really great savings from that. It's something that we're looking to do more.

Because the house is covered in PV with a battery alongside the infrared heating panels, so they're very energy-efficient homes anyway. Then adding all of this on really just makes it so the customers' bills are really coming down. And, yeah, I'm certainly jealous of their reduced bills now that we've come into winter.

Then the other things that we're doing is from April 2021, we went off-gas in all of our new land and build schemes. We've used a lot more heat pumps, got all electric in certain places, and used ground-source or air-source heat pumps.

It's building on what Adam was saying is that we've done that early, and it's really helped our knowledge and understanding. It means that we're now ahead of the curve in terms of what works and what doesn't work on our schemes, what we can achieve, and how far we can push things.

I think that's certainly what I see coming next is us continuing to be more ambitious around where we want to go next, so we can continue to be ahead of that curve, and we can have the learning, and we can work with others who have trialled things and learn from them, and we can share our learning with them so that we don't constantly make the same mistakes.

Not all housing providers and all builders just put something in that doesn't work, and then we go, yeah, we tried that five years ago, and it was terrible. It's like, well, we could have told them that, and they could have avoided doing it. Similarly, if we're looking at something, and then we've got contacts that say, "Stay away from that, avoid it like the plague," that's great. Or they can say, "We work with them. They're amazing," and that just helps us build that confidence.

Another building on the monitoring point as well that Adam said is the Switchee thermostats. These are a massive help for us to understand, certainly from the retrofit side, understand the energy usage within the home and any damp and mould issues and things like that. It really helps us be a lot more proactive when engaging with these customers rather than fully reactive.

I think that's something that I definitely want to see us doing more is more comprehensive monitoring of our homes. Not in a big brother, we are watching your every movement kind of way, but just in a more of giving us that understanding of the home and how it's being used.

And when a customer has an issue, is the issue caused by a fault in the building, or is it something that we can help them understand how to change, or something that we need to go in and fix and then go, "Yeah, that shouldn't be like that at all so we know something's wrong."

Having that data really helps us get there ahead of the curve rather than be waiting for customers to sit and deal with an issue for six months before then saying, "I can't take it anymore. I need to contact Stonewater." If we're aware from day one, we can then work with them saying, "This shouldn't be like this. Something is wrong, so we will come in and fix it for you."

It's what Adam said around the, it's the future-proofing of our homes. By building to what this net-zero standard from 2025, theoretically, those homes are retrofit-proof for their entire lifespan. You can't really get more energy efficient than not using any energy.

Building on Adam's other point there around the future-proofing of the homes, by going in now and building them to net-zero, we've future-proofed them. There's no need to go back in and retrofit any other works. It's then just about long-term maintenance. It's trying to understand that upfront uplift for us to build to that higher standard now versus the lifetime cost of having to go in and replace these components.

Because if it's going to cost you, say, 30 grand extra to build to it now, I'm pulling these figures out of nowhere so no one hold me to them. Say it cost you 30 grand extra to build it now, but in the lifetime of that house, you're spending 70 grand on changes, or going in, taking out a gas boiler and then putting in air-source heat pumps and then going in and adding PV and adding a battery; if it's going to cost you over twice as much in the lifetime say, it's better for us as a business, as a social housing provider to do it now and then save that legacy cost where we can.

I think that's one of the better benefits for social housing providers over private builders is that those costs stack up for us a lot more because we own the home for the duration.

### Paula Palmer

Great. Thanks, Rhys. I'm absolutely fascinated by the Wonderwall system and how it works. I think it's just magic, isn't it? Arthur, can we bring you in now? Because your role deals with sort of the day-to-day practicalities of helping us meet our sustainability goals when building new. I think Rhys touched on this a little bit. How are we balancing the books to ensure that delivery is both environmentally conscious but also cost-effective to customers and our business?

### Arthur Gott

Absolutely. Just firstly on hearing about the Switchee system is actually very exciting from Rhys on there. I like the idea of potentially our customers being able to call in and have us remotely diagnose some issues. It can really save a lot of time and ultimately get the problem solved quickly for the end user. I'm excited to see how that progresses.

In relation to what we do and what we install on here, we look to ensure that we're getting as much sustainable features in our homes at the operational stage on here. Ultimately, it's for the benefit of our customers and the end users in terms of providing energy-efficient properties and being able to reduce their energy output and their costs as well.

In regards to day-to-day deliverables and the things that we can do as project managers on site, we look to ensure that examples of carrying out virtual meetings as well as going on-site to help contribute to the reduction of $CO_2$, our carbon footprint, or traveling less to different places as well. We have different initiatives with individual contractors on reducing single-use plastics as well.

In terms of being involved with the specification and sustainable upgrades from the actual developments themselves, we try to get involved as early as the offer stage. When we're looking to make appraisals and offers, we can stipulate that we're looking to obtain sustainable items and for the developers and contractors to have consideration over them.

When we're putting our offer in, we would have an offer come through, we would produce it to the developer, and we would stipulate that we would need this to be off-gas from the get-go. It just forces that conversation straight away in order to see whether they have the viability and the means to be able to produce that for us. We can then cherry-pick those that are willing to move in that direction with us. We want partners to be having the same ethos as us in terms of our sustainability goals as well.

### Paula Palmer

Do you find that we've got lots of developers that are going down that route now, or are we still pushing that trend?

### Arthur Gott

Yes, we have a lot of developers that are keen to work with us, with our sustainable goals in order to make the development successful. We are in a natural transition period since the new building regulations came into effect from June 2022 and the improvements that we see to documents FL, NOS, in regards to heating and energy efficiency and ventilation, and what have you on there. What we find is that we are able and in a position to be able to put funding behind, including these sustainable items. That helps with being able to secure the new projects within our region.

Redrow is the only other housing provider committing to not fitting gas boilers. But we do find that in our region, even if we're not working with Redrow directly, other developers are happy to discuss putting in non-gas boilers, as long as we're able to cover the costings on that area. It's great to see that other developers are keen to be able to be flexible with us in us obtaining our sustainable goals.

Going on to future-proofing of our stock, what we find is that because we are in that transition period where some developments opportunities are coming to us, where they already have registered under the old building regulations, as such, they are coming to us potentially with on-gas solutions where they're not able to put enough gas. However, they are amenable for us to be able to add on or bolt on other different types of sustainability features that will still benefit our end customers.

For example, where we have a scheme that still has on-gas, we would look to install solar panels, but we'll look to try and back them up with battery storage on those. Also, look to include any other sustainable features, such as EV charging points, or at least the ducts or the infrastructure, so that we can look to make different changes going forward.

What we would look to also include is changes to the design or the fabric of the building in order for us to install, retrospectively, an off-gas solution. We would have asked the developer to have oversized radiators and the appropriate pipework in there in order for potentially, down the line, installing an air-source heat pump or a ground-source heat pump. And they would already have that uprated oversized radiators and infrastructure in place in the home in order for it to be an easier bolt-on retrofit in the future.

### Paula Palmer

Okay, thanks, Arthur. I think I remember, Adam, you were talking about at the Centre of Excellence, how we have homes for a longer lifespan. Developers are building it to get it off the shelf, so to speak, but we have to have a home that we can manage and maintain and last a lot longer. It's pretty good from our point of view, making sure that we can put these technologies and actions in place now to help us in the future.

### Adam Masters

Yeah, definitely. I think from my perspective and from a sustainability team perspective, we've definitely seen a shift in terms of what Arthur was talking about around a willingness from our other developers to make changes to their homes. I would suggest a couple of years ago, if we'd even offer to pay more money to have an off-gas solution, more often than not, the answer would have been no, sorry. Actually, that's just not possible. We can't do that.

Whether that's due to the supply chain developing in terms of low-carbon technologies and becoming more widely available or a shift in mindset from developers, I don't know. But there's definitely been a change. Even where we were previously saying we're happy to pay more, quite often, the answer would still be no. Whereas, that has definitely changed, I would say, recently.

### Arthur Gott

I think there's to come back on that point, Adam. With the changes in the building regulations it's forced the agenda onto the developers in a way that they're having to consider these new sustainable and off-gas solutions in the not-too-distant future anyway because they have to.

It's good that we can take the benefit of that and suggest things, if they can come into implementing those things a little bit earlier on some other schemes, they can now have that infrastructure in their own supply chains to be able to accommodate that which is all the benefit for us, really.

### Rhys Bevan

I think they've also realised that if they don't do it, at least start looking at it when they're forced to, they'd be so behind, they wouldn't have any of the infrastructure of the supply chain there, or those relationships with the correct companies to do it.

### Adam Masters

Yeah. At the Centre of Excellence, some of the themes we were talking around was a lack of policy or legislation, and this is a good example of where when legislation does come in and changes are made, it does create change, and people will follow suit.

There's a consultation launched this week as well for boiler manufacturers to have to produce a certain percentage of heat pumps for the volume of boilers they sell. Starting off at 4% and then 6%, et cetera. Again, forcing those large boiler manufacturers to support the heat pump market, I guess. Again, hopefully, that will drive further change.

### Paula Palmer

Emily, let's get you involved in the conversation. Let's talk about our customers. Can you tell us about how we're working with our customers, some of whom might be familiar with new technologies, others who might not be, and how do they get maximum benefit from all this fab technology?

### Emily Batchford

Yeah, it's something that we can't overlook, isn't it? Really important that whilst we're striving for all of these new, exciting technologies and solutions, that we engage our customers and make sure that they feel comfortable in using them.

On these new build schemes, especially with innovative solutions like Wonderwall, even heat pumps, we need to make sure that the contractors or installers are giving a really clear overview to our customers about how to use those systems most efficiently, and also to any colleagues that are on site as well, so that we've got knowledge internally on how to use those systems.

Then we've also got some animated videos on our energy hub, which I will always plug, because they're brilliant. They just give standard overviews of heat pumps and some storage heaters, as well as gas boilers for anybody who is still using those. They're just brilliant little nuggets of information on how to be using those systems most efficiently for people, colleagues or customers to go back to, just to give yourself a bit of a refresher. Then, of course, we can also direct customers to manufacturers' individual instructions, and videos as well, because they have those for individual systems as well.

We do all of that to make sure that customers are feeling confident, because these systems do work so differently to what they might be used to. An air-source heat pump working at a lower flow temperature, radiators aren't going to be as hot. We don't want people to feel concerned about that. They need to know what to expect, that the radiators are going to be larger and that they're going to feel a little bit cooler.

Then that will help them to a, feel confident but b, to not waste money. Because in that example, a heat pump will be at a lower temperature, but would be better to have it running more often, continuously. Whereas if we haven't explained this clearly or our contractors' installers haven't, then you might have somebody trying to use an air-source heat pump like a gas boiler, putting it on short bursts to try and get those radiators up to a really hot temperature, which is just going to be costing a lot. It is really important, especially given, as Rhys was saying, the cost of fuel. We can't let people be wasting money in that way.

### Adam Masters

Thanks, Emily. Talking about feedback from customers and Rhys, you've touched on the monitoring that we've got in some of the homes earlier. Have we had any insights that have come out of some of those schemes? Can you talk a bit about what we would do with that information and what the plan is to feed that back in and close that loop, I guess?

### Rhys Bevan

Yeah, I think one of the main things that we saw or have seen is certainly around, it's like Emily said, that change in lifestyle, need for customers to just think, I've lived this way for 50 years. This is how I've always heated a home. This is how I'm going to keep doing it. We have seen in some cases the impact that that has.

But then similarly, it's shown us the benefits of something like the Wonderwall system with the infrared heating panels. In that, they do essentially work in a very similar way to a traditional radiator. In that, you turn them on to heat things up.

That scheme has really shown us the benefits that customers have found. They've always said they like them mounted on the ceiling because we have them mounted on the ceiling in that scheme. I think that has been one of the big bits of learning for me when was expecting this to be a big issue, and then it not being. It shows me the benefit of if you do have a scheme that's energy efficient

enough to warrant something like infrared being a cost-effective method, then that's great, and it's something we should explore.

### Adam Masters

Yeah, definitely. I think on the monitoring at Axbridge as well, we've seen quite a range of consumption, haven't we? We've had some really good insight into how different families perhaps utilise their homes and enable us to have discussions and ensure that people are comfortable with the way they're living.

### Rhys Bevan

Yeah, I think Mark from Wonderwall, said to me once, he said, "We can build them a sustainable home, but we can't make them live in it sustainably." That's true across any home type. Yeah, I mean, Axbridge is a key example of the difference in 300% more energy from the most used to the least used. The homes, they're the same, almost identical, all the homes. It just shows how different people live and use their home and the difference that can have.

But like Emily said, we've tried to make these bits of information for customers around how they can use it. One of the ones Emily and I worked on was for PV panels, so solar panels on the roof, and it was just explaining to people how they work, and how they can make the most of them. I think that's been really key.

Just because we understand this stuff because I work with it every day, this stuff is new to a lot of people, and unless you kind of help guide them into how to use it properly, it's next to useless if they're not able to make the most of it.

### Emily Batchford

I think we've seen that actually from some of the work we've done surveying customers that have had low-carbon heating types as well. We did a survey probably 18 months or more ago, looking at customers who have either an air-source heat pump, a ground-source heat pump, or the extra-efficient Dimplex Quantum storage heaters. We were asking them about usability, affordability, and cost so that we could understand what the customer experience was of those technologies.

It was really interesting to see that the ground-source heat pump tended to get better feedback, but that correlated with the fact that of the customers that had the ground-source heat pumps, 70% of them said that they had been shown how to use that system when they'd moved in, or the technology had been installed whilst they were living there. Again, they'd been shown how to use it properly.

It's demonstrating that if we can explain things well and clearly and prepare people for using those systems, that they're going to have better success rates from them. Whereas, unfortunately, from that survey with air-source heat pumps, many customers were saying, "I was never shown how to use them." Then obviously weren't satisfied with them, weren't finding them efficient. That definitely comes down to what can we do better in terms of explaining them very early on.

### Rhys Bevan

I think those videos are such a benefit there that we've had made around how air-source heat pumps work and the different systems. Because if you move in somewhere and, say, end of March and it's starting to get warm, you just moved into your first ever house that you've bought, and someone's trying to show you how to use your heating system, the odds are, you're going to have completely forgotten what they said by the time November rolls around, and you actually need to use it. And you go, "On that day, I had so much information thrown at me, I can't remember. Having those videos really helps. As long as, yeah, we can just signpost customers to those, I think that's a really brilliant thing to have.

### Paula Palmer

Yeah, absolutely. Agreed. I mean, I've heard all these terms, and I know these technologies are there, but I wouldn't have the foggiest clue how they work in real terms. It's fantastic that we're doing that work, but also making sure our customers are able to use it properly, because as you said, it's a waste otherwise, isn't it?

Let's bring this episode to a close. Thanks for joining me, everyone. We'll be continuing the sustainability theme next month when we'll be joined by guests talking about retrofit, some more from Adam's team. That's going to be about how we improve our existing homes to make them fit for the future and suitable for our customers now.

### Paula Palmer

*On the Air* is found on our website, www.stonewater.org, and wherever you listen in so you can go and catch up on what you've missed. Thanks again, everyone. Thank you for joining the show.

### Arthur Gott

Thank you.

### Adam Masters

Thanks for having us.

### Paula Palmer

Thanks to everyone for listening.

### Announcer

We hope you enjoyed listening to the latest episode of *On the Air*. We'll be publishing a new episode again soon, but to stay up to date, subscribe to our channel. Thanks again for listening. Don't forget to share your thoughts with us on LinkedIn or Twitter by tagging #swontheair