

The Vale of Glamorgan Council

Hybrid Retrofit Project

YOUR QUESTIONS and ANSWERS
Helpful Information for Tenants



Working in partnership with

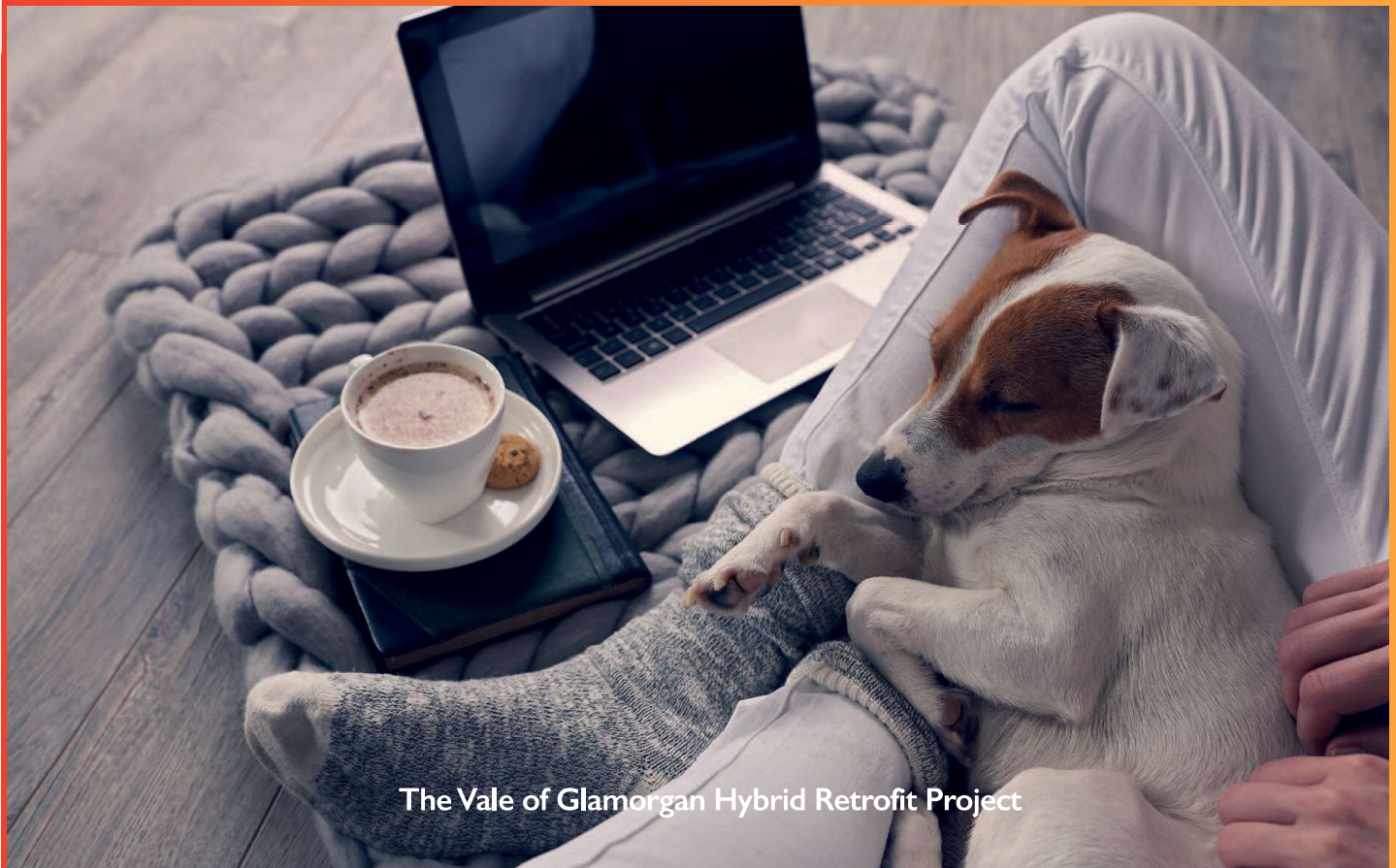


Will the new **hybrid heating system** cost me money?

No, the installation is dependant on the outcome of the pre-survey and, if suitable, will be fitted and serviced free of charge by the Vale of Glamorgan Council. There may, however, be a slight increase in your electricity bills, but this will be offset by the savings made to your boiler costs, due to lower usage.

Why has my **property been chosen** to have this system installed?

Your property has been chosen as one of the first Council owned properties in the Vale of Glamorgan to have a hybrid heating system installed in their home. This system will help with potential savings on your heating bills, in some cases help with fuel poverty and assisting in reducing our carbon footprint as a whole, within the Vale of Glamorgan.



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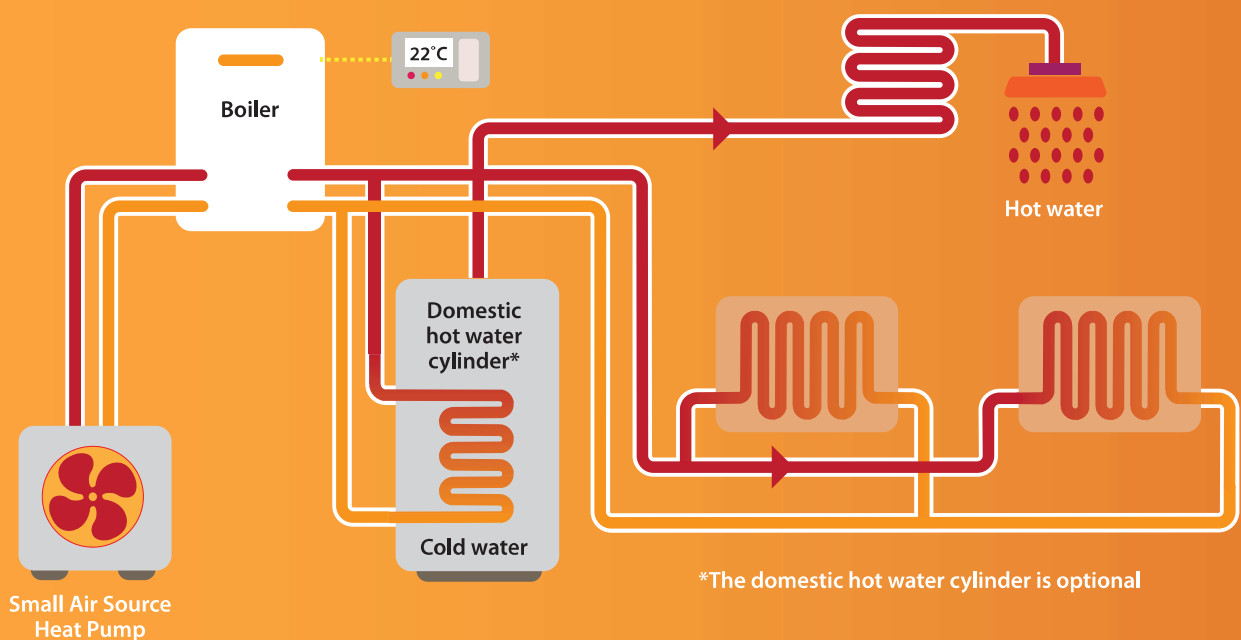
What is an air-source heat pump (ASHP)?

An air-to-water heat pump extracts heat from the outside air in the same way that a fridge is able to extract heat from its inside. It can get heat from the air even when the outside temperature is as low as -15C. Heat Pumps still need electricity to run, but the heat they extract from the air is constantly being renewed naturally.

How does the system work?

A hybrid heating system combines a gas/oil system with an air source heat pump to allow domestic heating systems to select a different primary heating fuel based on fuel cost, considering heat demand and system efficiency.

A hybrid heating system automatically selects the most cost-effective heating mode at any time of the day or night, all year around. It takes into account external temperatures and internal heat and hot water demand, as well as the relative cost of gas and electricity.

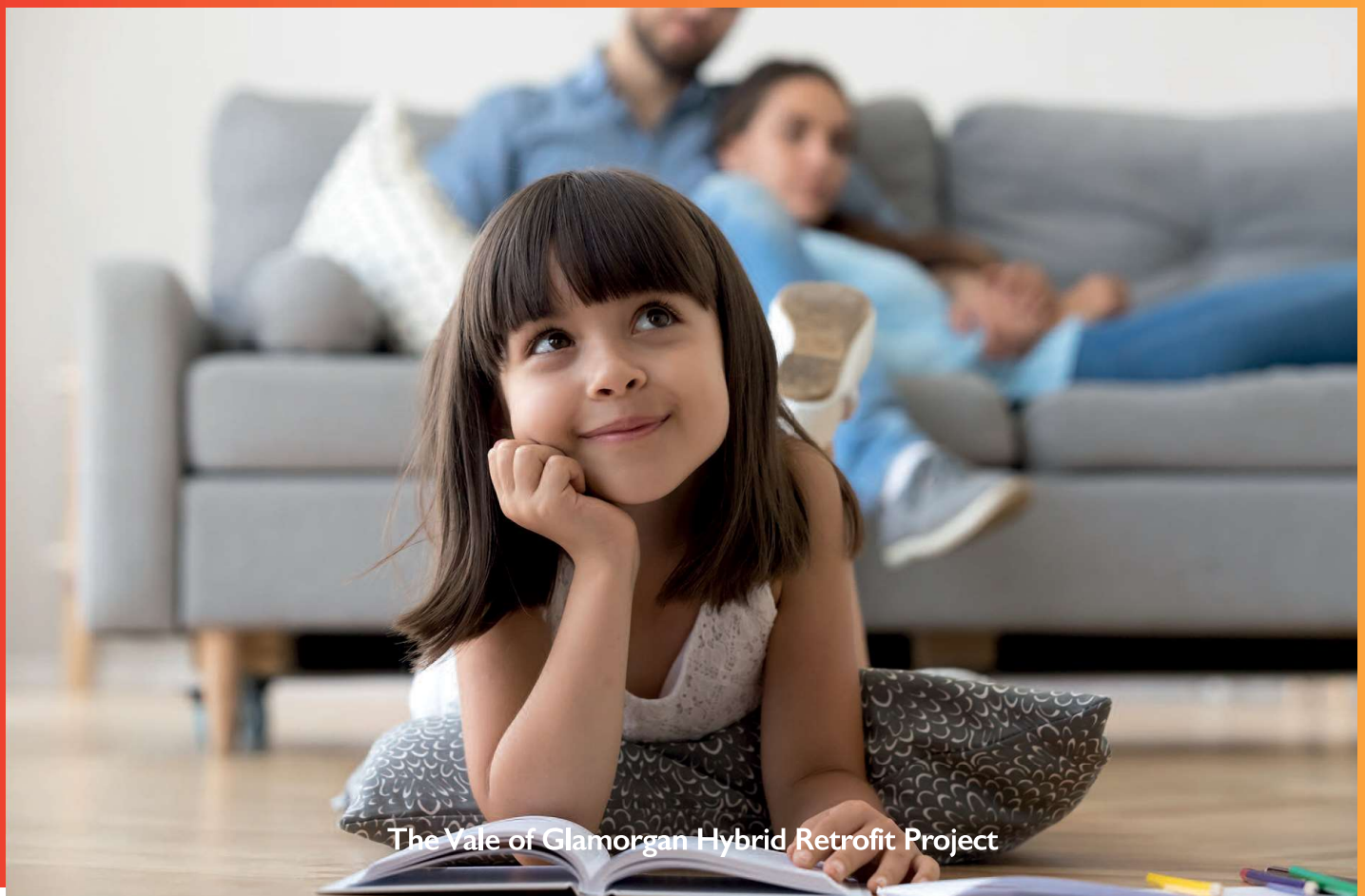


Is this system a renewable technology?

The air-to-water heat pump in the system uses “air” as a renewable source of energy to provide heating. The heat pump uses electricity to operate the pumps and compressor, but it generates more renewable heat energy than the electrical energy it consumes so it is classed as a renewable energy.

Taking into account its electrical consumption, a portion of heat provided by the heat pump is renewable, whilst additional energy generated by a gas boiler is not renewable.

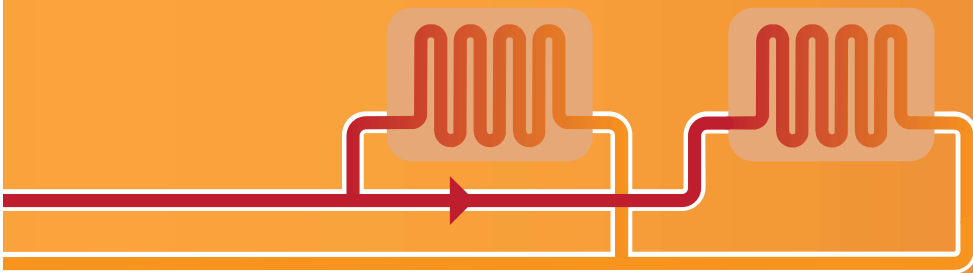
In the future, we expect more renewable electricity and renewable gas to be available in the local and UK integrated energy system and so the carbon footprint of the hybrid heating system could be very low.



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Can it **heat my home and give hot water?**

Yes. The hybrid heating system can provide you with both heating and hot water. Heating is provided by the air-to-water heat pump, supported by your boiler on colder days. The boiler provides hot water without the need for a cylinder, making it ideal for any home. The systems will also work well with hot water storage tank systems.



How much **space** will it take up?

A typical boiler unit will be installed in your home, but sizes may vary, so please ask our approved installation partner to check carefully. The outdoor unit (air source heat pump) is connected to the indoor gas/oil boiler unit by a small pipe system which we usually bury underground.

Space will be needed in your back garden for the outdoor unit – it should not be too close to fences, walls, hedges or neighbouring properties to make sure air can move around it.

Will the **system work** in my home?

The hybrid heating system with its combi boiler is suited to any home capable or being heated by a single gas/oil boiler. It can cope perfectly with higher heat loads in older properties.

The system is designed to deliver high flow temperatures and can provide enough heat without needing to change radiators.

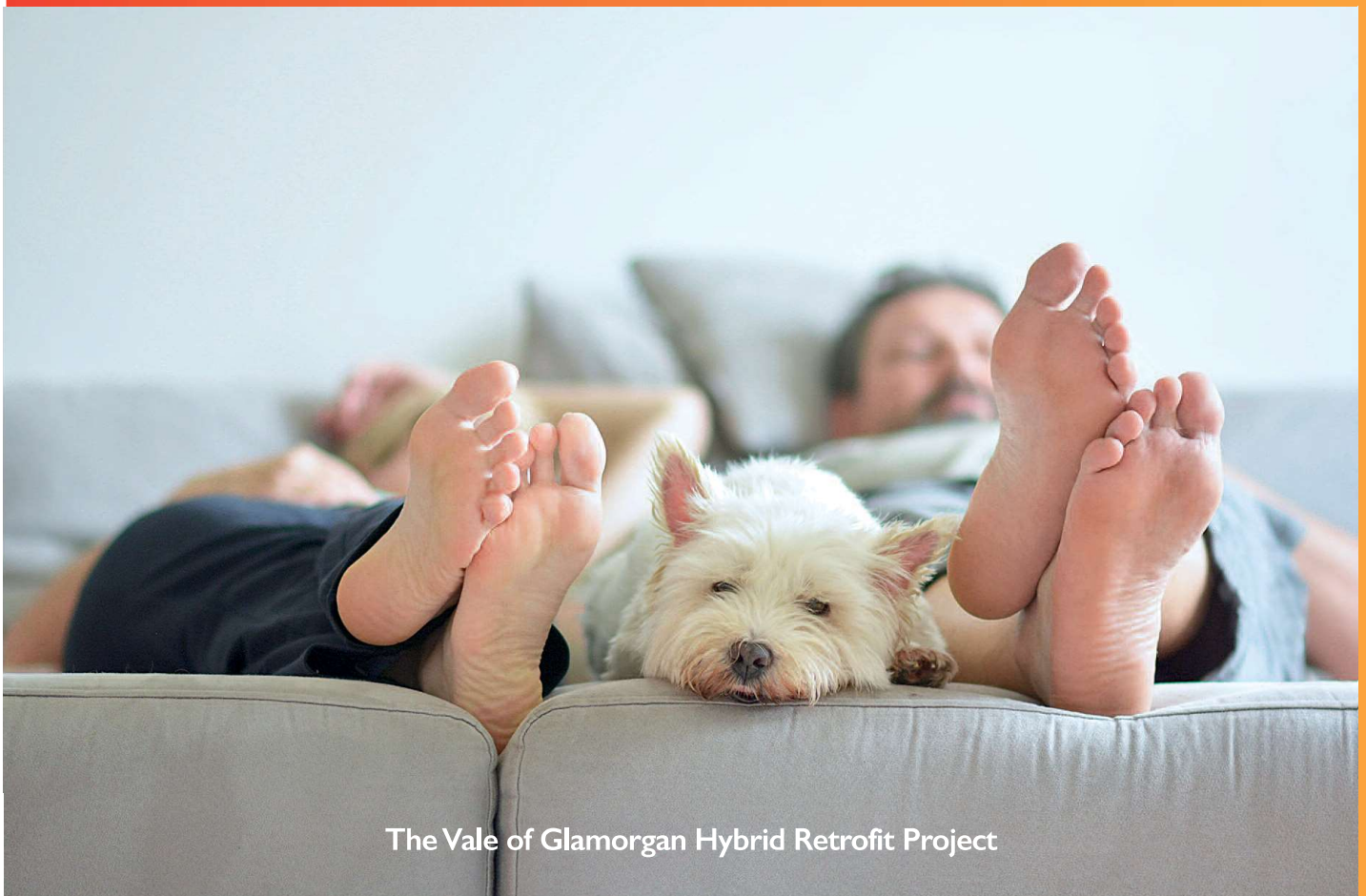
How much might I save?

We'll need to do a full site survey to assess the operating temperature of your heating system. Our installer partner will then be able to give you a better idea of how much you'll save.



Can it cut my carbon footprint?

Yes. The carbon emissions from electricity are about 2.5 times higher than the carbon emissions from gas. However, the hybrid heating system will only run when it's more efficient than the gas/oil boiler and so could reduce your carbon emissions by up to 35% compared with running a boiler alone.



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Will I **save money** on my **fuel bills?**

Yes. The hybrid heating system uses a smart hybrid control that automatically selects the most energy-efficient and cost-effective operation based upon the energy tariff, at any given temperature.

You will still have to pay electricity fuel bills with a heat pump because it is powered by electricity, and you will still have a gas/oil bill for the boiler part. But the system maximises use of the heat pump, so overall you will save on the fuel you need for heating.

Is the system **noisy?**

The hybrid heating system units are quieter than you might expect. The outdoor unit creates a similar sound level to a quiet conversation.

Our approved installation partner will be happy to give you further details on this type of system.

Will the **system** need a lot of **looking after?**

No. The hybrid heating system pump should be checked and services annually by a service company working in partnership with the Vale of Glamorgan Council, who is both a Gas Safe and F-Gas registered contractor. This will help to ensure that both the boiler and the pipework are safely maintained.

Can I control the system from my smartphone?

Smartphone controls are fitted to allow you to remotely set your heating at more exact times for you, potentially saving on your heating bills.



Swansea University's 'Active Building Centre Research Programme' wants to understand the ways in which low carbon homes impact on the health, social and financial wellbeing of people throughout their lives. Low carbon homes can include newly built houses or existing homes that have had modifications to them to achieve low energy status (retrofitted homes). You can help us to understand more about what can improve housing conditions and comfort by helping us with our research. We would also like to speak to those who have decided against taking part in having their homes modified and understand some of the reasons why.

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If you have any further questions, please contact:

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