

# Your Low-Carbon Home at Gwynfaen

pobliving

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part of **pobl** group

# Inside Your Home

## Fabric First Construction

The homes at Gwynfaen have been built using a 'fabric first' approach this means we have specified certain components when building the homes and focused on reducing the home's heat loss, so the home is affordable to heat. This includes:

- Maximising airtightness
- Increased levels of insulation
- Optimising solar gain through the provision of openings and shading - window positions have been carefully chosen and triple glazed windows used for further heat retention.

The homes at Gwynfaen include an airtight membrane. If you need to hang items from the walls (e.g. TVs, shelves, pictures) you need to be aware that you should where possible screw into the battens behind the plasterboard located approx. every 600mm. If this is not possible you should not use screws any longer than 50mm as using screws any longer will break the airtight membrane and decrease the thermal efficiency of your home.

## Energy Provider

Eon is your energy provider. Eon Group is one of Europe's largest operators of energy networks and infrastructure, serving approximately 47 million customers. When you move in you can choose which available tariff is the best for you. Alternatively you can also shop around and find an alternative energy supplier who is right for you.

At handover, you will have 2 energy meter readings: 1 import reading and 1 export reading. If you generate more energy than you use, you will see a credit on your energy bill. E.g. on a sunny day if you're not home or on holiday and not using an energy, your battery will fill, and the excess energy will go back to the grid (export) and you'll get a small payment for this (not at the rate you buy energy for – much less).

## Heating

The Air Source Heat Pump (ASHP) provides your heating and hot water. All the homes at Gwynfaen are on 1 zone heating.

A central thermostat is located downstairs and there is a CO2 sensor next to the thermostat to monitor relative humidity.

Not all your radiators will have TRVs – the number will change depending on the size of the house. Turning a radiator off will also compromise the efficiency of the heating system so you should not do this.

You will need to start thinking differently about how you use your heating – with a gas system you turn your heating on at 5pm and your home will start to warm up practically straight away. With the type of system in your home you will need to set the programme so that the room is warm at 5pm not the heating comes on at that time.

A consistent temperature is better for the ASHP system rather than big increases/decreases in temperature which make it work harder and will cost you more money to run. We suggest you should find a constant temperature that you are comfortable with and programme you're heating to this temperature.

When you move in, the heating will automatically be set at 16 degrees as standard.

## **Air Source Heat Pump**

The Vaillant Air Source Heat Pump is located on the patio (it looks a bit like an air conditioning unit) – a 900mm space needs to be maintained around the pump to always maintain air flow.

The air source heat pump is insulated to protect it against cold weather in winter months.

It sucks air from outside, then uses it to heat a special refrigerant liquid. As it warms up, the liquid turns into gas. This gas is then compressed to increase its temperature, which is then transferred around the home. Once the gas cools down, it becomes liquid again and gets re-used at the start of the cycle. It's a type of heating that works like a fridge freezer in reverse.

The air source heat pump will work effectively at Gwynfaen because it has been installed in homes that are very energy efficient and airtight. The homes at Gwynfaen are EPC A rated.

The heat pump heats water in the system to 45 degrees - a lower temperature than traditional boilers - so the radiators that have been installed are bigger than traditional radiators - they have a larger surface area which gives the heat output you need.

You're heating and hot water can be managed via the programmer in your home or via the Vaillant App which allows you to manage your energy at any time.

## **MVHR (Mechanical Ventilation with Heat Recovery)**

The concept of an MVHR is to bring fresh air from the outdoors into the home and at the same time extract warm moist air from rooms like bathrooms and kitchens.

Both airflows pass through a heat exchanger where heat is transferred from the extracted air to the fresh filtered air which is then distributed to the living areas within your home.

The system can keep up to 95% of heat that's normally lost through open windows, trickle vents and extractor fans, allowing you to make energy savings. It's like recycling warm air from one part of your house to another.

Because the homes are so airtight, it's important that we introduce fresh air into the home through this MVHR system.

There are MVHR boosts in all wet rooms. In the bathrooms and ensuites there is an extra switch next to the light which is the boost switch. In the kitchen on the bank of switches there is a cooker hood switch and an extractor fan switch – the extractor fan is the MVHR boost switch for the kitchen. Boost switches only need to be used when someone is cooking or showering/having a bath and extra steam/moisture is in the air.

Filters in MVHR will need to be changed regularly. And will need to be changed more often while construction work is ongoing because building materials can clog up the filters. Please ensure the filter is changed at least once a year but do check the conditions of your warranty.

The MVHR is located in the attic space in most homes, apart from Lili and Lili Variation where it is in a cupboard, and the ASHP is located outside.

The MVHR system should never be turned off.

The ASHP & MVHR systems mean there will be a low hum as the system works continuously.

## Hot Water Cylinder

Water is heated and then stored in the cylinder ready to use whenever it's needed. Storing hot water in this way is more energy efficient and the Vaillant cylinders experience minimum heat loss after 24 hours. The size of the hot water cylinder will depend on the size of your home.

The hot water cylinder does have an immersion heater for back up, this can be used to boost hot water if you ever need it.

The hot water cylinder has 2 vessels above it which are expansion vessels for excess heat energy. As it is a pressurised cylinder these are used to balance the system.

Because the water is heated to 45 degrees, to prevent any chance of Legionella developing the system boosts to 60degrees once a week to get rid of any bacteria. This is automatic.

## Battery

In the majority of homes, the 10kw battery is located in the loft, apart from Lili and Lili Variation where it is in a cupboard. A 500mm area of free space needs to be maintained in front of the battery.

After 10 years the battery should still work at approx. 90% efficiency. If there is a power cut, and your battery is full, you still won't have any energy because the battery needs power to operate.

## Photovoltaic Panels (PVs)

Every home has PVs – some plots have more PVs which means they can get more free energy from the sun. Please ask a Sales Negotiator for the output for your plot.

Each home on the development has been carefully orientated at an angle that captures as much free, renewable energy from the sun as possible. Essentially any energy generated by the PVs is free energy for you to use.

If the energy demand in your home is less than the PVs are generating from the sun, the energy will be stored in the battery.

Your first supply of energy comes from your PV panels (if it's sunny), if no energy is being generated from the sun, then energy will come from the energy stored in the battery, when there is no energy remaining in the battery, your energy will come from the Grid.

## Internet

There is a Hyperoptic fibre connection already in your home because the BEE uses a Hyperoptic connection to function. This means if you don't want to wait to be connected to providers like Virgin and BT, you can sign up to Hyperoptic from day 1 (the Sales Team have leaflets from Hyperoptic should this be of interest to you).

There are also Virgin and BT connections in your home. Residents are responsible for any connection charges applicable.

## EV Charger

Each home will have an Evie EV charger either attached to the side elevation of their home or on their driveway.

More information can be found in your handover pack.

## Sprinklers

Building Regulations in Wales require that all homes are fitted with a sprinkler system, you may have a pump or tank in the loft to ensure the required water pressure for the sprinkler system. There is a separate stop tap for the sprinkler system.

The system is heat activated and will only activate upon detecting intense heat in the area of the home where the heat is detected.

If there is a water tank in your loft, when it is serviced annually the engineer will check the water level in the tank to ensure there is enough pressure in the system for the sprinkler system to work properly. If the water level has dropped a tap has been located in the loft to make it easy for the tank to be topped up.

## Warranty Information

The MVHR, ASHP, Battery, sprinkler and hot water cylinder need annual servicing.

The ASHP needs an annual service to maintain its warranty, this service should be done within 1 year of commissioning date not 1 year following the purchaser moving in. The date of commissioning can be found on the certificate provided to you at handover.

# Site Wide Information

## SuDS

Sustainable drainage systems (SuDS) are drainage solutions that provide an alternative to the direct channelling of surface water through networks of pipes and sewers to nearby watercourses.

SuDS aim to reduce surface water flooding, improve water quality and enhance the amenity and biodiversity value of the environment.

Some properties at Gwynfaen have SuDS features within their properties, for example a rainwater garden in front of their home or permeable paving on the driveway. Pobl will maintain the rainwater gardens.

There is also an attenuation basin on site that acts as an overflow for excess water. If you have children or children visit you at Gwynfaen please be mindful of this open water feature.

## Easements

A drainage easement states that access to part of the property is given to a third party for the purpose of maintaining drainage.

A drainage easement can include a drain which feeds into a drainage system or in the case of rain gardens, water should be allowed to drain into the area. What this essentially means is that purchasers cannot build on areas of easements and should not change anything within the easement where a rain garden has been installed.

## Permitted Development Rights: Car Parking

At Gwynfaen permitted development rights have been removed in relation to the parking of cars and in relation to hard standings for vehicle parking (no conversion of garages and car ports will be allowed).

Car parking spaces shall be permanently retained and used only for the parking of vehicles. This is to ensure adequate parking provision is provided and retained for each home and to ensure that the parking spaces are not inhibited by permitted development.

No hardstanding's shall be constructed/ provided forward of the principal elevation of the building line without the express permission of the Local Planning Authority. This is in the interests of visual amenity to ensure landscaping is retained and ensure front gardens are not dominated by vehicle parking.

## **Bird & Bat Boxes**

Some homes have bird or bat boxes attached to them. Birds and bats are important to our ecosystems. The bird and bat boxes aim to provide safe places to live and encourage wildlife in the area. Residents should not remove these.

## **Cladding**

The cladding used on some of the homes at Gwynfaen is Welsh larch fire treated half lap cladding. The logs have come from 2 sites: Lake Vyrnwy and Elan Valley. The cladding should not be painted or stained. It has been fire-treated and has a life of approximately 30 years.

The colour of the larch will turn silvery-grey after 1-3 years.

## **Estate Charge**

The estate charge at Gwynfaen is £350pa per property – Please see the Estate Charge Booklet for more information.