

EE. Environmental and energy efficiency

Design codes in the following section apply to the whole parish. They contain important policies that will help to reduce our collective impact on the planet while allowing the natural environment in and around Penn Parish to flourish.

They include general guidance that apply to both new and existing development as some of the policies can be used to modify existing dwellings to become more environmentally sustainable.

Owing to the area's rich green space character, it is hoped that more of these policies are adopted in the future to help preserve and sustain this distinct character.

EE 01- FEATURES IN DWELLINGS

The following section elaborates on energy efficient technologies that could be incorporated in buildings and at broader Parish scale as principles.

Use of such principles and design tools should be encouraged in order to contribute towards a more sustainable environment.

Energy efficient or eco-design combines all around energy efficient appliances

and lighting with commercially available renewable energy systems, such as solar electricity and/or solar/ water heating and electric charging points.

These features will contribute towards the Neighbourhood Plan policies on net zero.

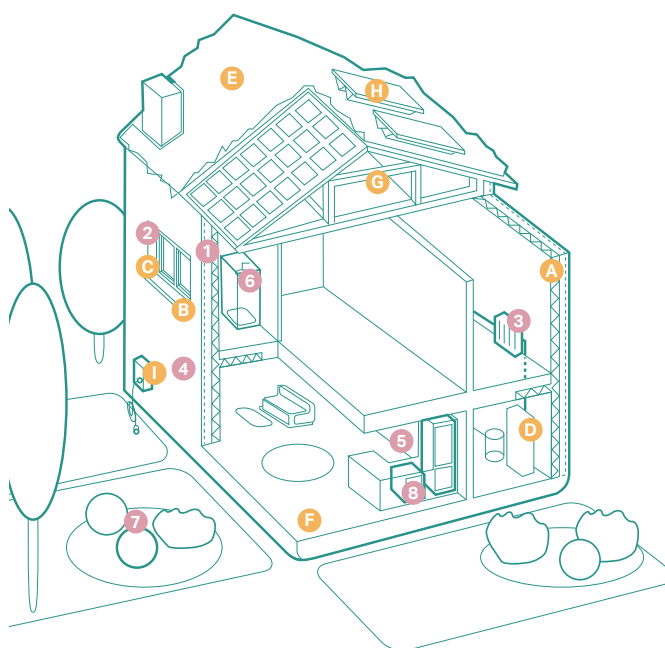


Figure 91: Diagram showing low-carbon homes in both existing and new build conditions.

Existing homes

- 1  **Insulation**
in lofts and walls (cavity and solid)
- 2  **Double or triple glazing with shading**
(e.g. tinted window film, blinds, curtains and trees outside)
- 3  **Low-carbon heating**
with heat pumps or connections to district heat network
- 4  **Draught proofing**
of floors, windows and doors
- 5  **Highly energy-efficient appliances**
(e.g. A++ and A+++ rating)
- 6  **Highly waste-efficient devices**
with low-flow showers and taps, insulated tanks and hot water thermostats
- 7  **Green space (e.g. gardens and trees)**
to help reduce the risks and impacts of flooding and overheating
- 8  **Flood resilience and resistance**
with removable air back covers, relocated appliances (e.g. installing washing machines upstairs), treated wooden floors

Existing and new build homes

- A  **High levels of airtightness**
- B  **Triple glazed windows and external shading**
especially on south and west faces
- C  **Low-carbon heating**
and no new homes on the gas grid by 2025 at the latest
- D  **More fresh air**
with mechanical ventilation and heat recovery, and passive cooling
- E  **Water management and cooling**
more ambitious water efficiency standards, green roofs and reflective walls
- F  **Flood resilience and resistance**
e.g. raised electrical, concrete floors and greening your garden
- G  **Construction and site planning**
timber frames, sustainable transport options (such as cycling)
- H  **Solar panels**

EE 02- WILDLIFE FRIENDLY FEATURES

Biodiversity and woodlands should be protected and enhanced where possible.

- Roadside verges, hedges, and trees should act as natural buffers and should be protected when planning new developments;
- Abrupt edges to development with little vegetation or landscape on the edge of the settlement should be avoided and, instead, comprehensive landscape buffering should be encouraged;
- New developments and building extensions should aim to strengthen biodiversity and the natural environment;
- Ensure habitats are buffered. Widths of buffer zones should be wide enough and based on specific ecological function;

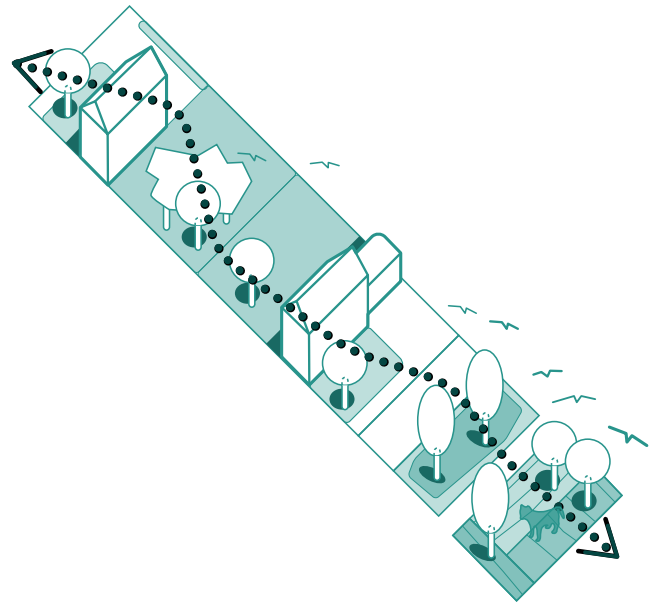


Figure 92: Diagram to highlight the importance of creating wildlife corridors.

Figure 93: Examples of a bughouse decorating rear gardens or public green spaces.

Figure 94: Examples of a frog habitat decorating rear gardens or public green spaces.



- New development proposals should include the creation of new habitats and wildlife corridors such as planting wildflowers and bulbs on the village green spaces, meadows and verges. This could be by aligning back and front gardens or installing bird boxes or bricks in walls and improve habitat at ponds. Wildlife corridors should be included to enable local wildlife to travel to and from foraging areas and their dwelling area;
- Avoid low maintenance gardens which are harmful to wildlife by reducing hard landscaping.; and
- The loss of any tree and garden should be discouraged. Encourage permeable pavement and gardens which is beneficial to biodiversity net gain.



Figure 95: The ancient woodland in the parish should be protected along with other important green spaces.