SUSTAINABLE WHADDON

Opportunities to enhance ecology and biodiversity

Opportunities to reduce our carbon footprint

IMPROVING INSULATION IN HOMES

Are you using more energy to heat your home than you should? Would your home be more energy efficient if better insulated? How to improve the insulation in your home depends on its construction.

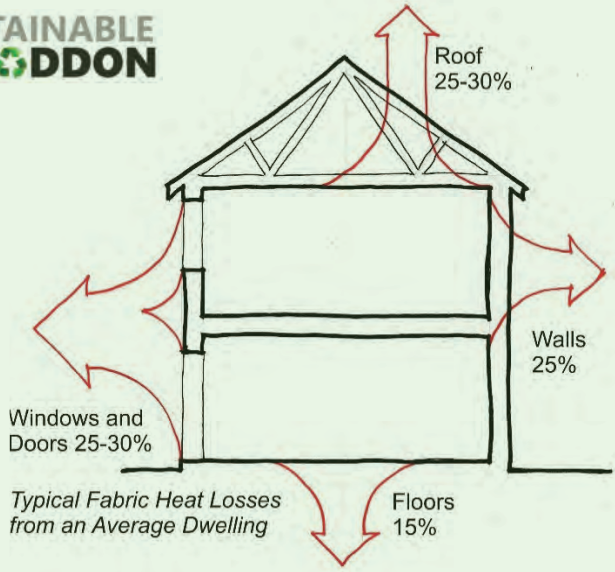
Older properties, i.e. those built before 1918, are likely to require vapour permeable insulation to ensure the fabric remains 'breathable'. This is particularly important for listed buildings, where an individual, bespoke solution is likely to be necessary and listed building consent will be required for any upgrade to the fabric. However, the vast majority of houses in Whaddon were built after the end of the Second World War, and are built to modern construction standards incorporating damp proof courses and cavity walls. And it is these types of property that are the focus of this article. It should also be noted that Building Regulations approval may be required when undertaking this type of work.

Roofs: A typical house can lose between 25% and 30% of its heat through the roof. Standards of insulation in roof voids have steadily increased over the last 50 years and these days 250mm (10 inches) is generally considered a minimum. But a number of older houses built since the war could have considerably less insulation, so check your attic as adding additional insulation to a standard loft is both straightforward and very cost effective. However, it is also important to retain ventilation of the roof space above the insulation to prevent condensation forming on the underside of the felt that is placed under the roofing tiles. Most homes will include some form of ventilation at the eaves

and it is important that any new insulation added to a roof does not block this ventilation path. Houses with rooms built partially or wholly within the roof space will be more problematic and are likely to require a bespoke solution in order to improve the levels of insulation to their roofs.

Windows and Doors: Alongside roofs, the other most common area for heat loss in homes is through windows and doors. Single glazing and poor draught-proofing are likely to result in even higher levels of heat loss. The majority of houses in Whaddon today are already likely to have double glazing and those that retain single glazed windows are more likely to be listed buildings where permission will be required to make any changes, and only changes that have minimum impact on the historic character of the property are likely to be approved. For modern, post-war houses the most common type of replacement windows incorporate UPVC frames, but when considering replacement windows, it is important to also take into account the 'whole life' implications of the windows. Currently, uPVC window frames cannot be recycled when they reach the end of their useful life, and can only be sent to land-fill sites. Aluminium window frames are more expensive than uPVC, but can be fully recycled at the end of their useful life, while timber windows will biodegrade and growing new timber for use in buildings can help absorb carbon from the atmosphere. Finally, in respect of windows, triple glazing is now becoming more widely available and will further reduce fabric heat losses.

External Walls: The vast majority of houses built since 1945 (and some built in the inter-war period) will have cavity walls - ie the wall is made up of two leaves of masonry with a 50mm (2 inch) air gap between the two leaves. From around the 1980s onwards, insulation started to be included within the cavity, but it is also possible to retro-fit insulation into cavities on earlier houses that have no insulation. However, not all cavity walls will be suitable for filling with insulation as some may have excessive mortar droppings on the wall-ties



that link across the cavity, and in those instances the mortar may act as path for damp, which can then be exacerbated by the installation of cavity wall insulation. It is therefore important to have a survey undertaken to ensure your cavity is suitable and a reputable installer of cavity wall insulation should undertake that as a matter of course. In very exposed locations, cavity wall insulation is not considered advisable, due to issues with driving rain, but Whaddon is not designated an exposed location.

Floors: It is perhaps fortunate that houses only lose about 15% of their heat through the ground floor, as upgrading the insulation to a floor is both disruptive and expensive. But in the event that a house refurbishment includes replacing a concrete floor, then that will provide an opportunity to incorporate sub-floor insulation into the replacement floor.

Cold Bridging: When upgrading insulation on the fabric of a house it is important to avoid creating 'cold bridges'. These occur where small areas of fabric are left uninsulated, such that the surface is colder than

adjacent areas, creating a risk of condensation and mould growth. For example: in roofs, the original insulation is usually laid between the ceiling joists, but when adding additional insulation it is advisable to lay this at right angles, so that it runs over the ceiling joists, thereby avoiding the risk of these joists forming a cold bridge. And again, when installing cavity wall insulation, and particularly in areas of high moisture such as bathrooms and kitchens, it may be necessary to add a layer of insulation bonded to plasterboard to the window reveals, since the block work cavity closure at the window jambs can also create a cold bridge.

David Grech - On behalf of Sustainable Whaddon

SUSTAINABLE WHADDON UPDATES

Swift boxes Ready made, free and waiting for new homes



- **Homes for Swifts**. Would you be interested in providing a much-needed home for a migratory swift? They just need a nesting site situated on a north or northeast facing wall, at least 5 metres from the ground, and with a clear unobstructed flying area at the front. If you think you could help, then we have a number of ready-made nest boxes waiting to be installed. The boxes are free – thanks to a grant from the Parish Council – and we're happy to help put them up. If you are interested, please email us at sustainablewhaddon@whaddon.org. We've already installed six boxes in St. Mary's Church, and other houses in the village also have swift boxes. Once installed we will await the arrival of the swifts in April!
- **Bug Hotel**. If you have a spare moment, the bugs would no doubt welcome a few additions to their rooms. They particularly like pine cones, broken pottery, twigs, hollow stems, bark and leaves.
- **Seeds.** And don't forget, if you have any spare seeds, then the **Seed Exchange** in the telephone box on Meldreth Road would definitely welcome them.
- **Soft plastics.** You can also recycle your **soft plastics** such as crisp packets, salad and bread bags, bubble wrap -- in fact anything you can scrunch by simply placing them in the brown wheelie bins at the Village Hall.