Energy Performance Buildings Guide

Householders can and are encouraged to take measures to improve energy conservation in their homes since less energy consumption can reduce energy bills.

The purpose of this guidance note is to clarify if certain energy conservation works require building regulation approval before being carried out.

How do we decide if the building regulations apply and, if so, does application have to be made to the council?
In determining whether or not building regulation approval is required building control must, in addition to other considerations, take into account two important definitions in the building regulations, namely 'building work' and 'structural alteration'.

BUILDING WORK *means the erection of a building, the structural alteration or extension of a building (including work in connection with the making of a material change of use) or the provision of a service or fitting.*
STRUCTURAL ALTERATION *means the execution of any work (other than the erection of a building and the provision of a service or fitting) to which the requirements of these regulations would apply if the work were part of a building being newly erected and includes the replacement of windows (other than the replacement by ones having essentially similar features) and the insertion of material into a cavity in a wall of an existing building for the purpose of insulation*
We also have to consider how the existing dwelling may be affected by a 'structural alteration' (the alteration must not cause any new or greater contravention of any regulation).

If the work involves the renovation or replacement of a **'thermal element'** (wall, floor or roof) then Part F (Conservation of fuel and power) will apply.
Typical energy conservation measures that may be considered
So as to enable comparisons to be made between the standards that may exist in your dwelling and current building regulation standards the provisions made in a *typical new dwelling* *are included.

1) **Cavity wall insulation**
The regulations apply and application must be made to building control before starting the work however, in this case, no fee is payable. The insulation should only be installed by an approved installer.
(External walls in a new dwelling will typically have a 'U' value of 0.3 or less. An uninsulated 50mm wide cavity in a wall consisting of dense concrete blockwork however is likely to have a 'U' value of only about 0.7)*

2) **Roof insulation**
The regulations apply and application must be made to building control before starting the work.
*(*In a typical new dwelling having a pitched roof with insulation laid at ceiling level usually 300mm thick mineral wool quilt)*

3) **Replacement windows or external doors of a dwelling**
The regulations do not apply where the windows are to be replaced by ones having essentially similar features. In all other cases the regulations do apply but it is not necessary to make application to building control. Please note however that it is the

responsibility of the dwelling owner to ensure that the work complies with the relevant requirements of the regulations.
(A typical new dwelling may have double glazing including a 16mm gap and usually low E soft coat glass)*

4) **Draft proofing**
The regulations do not apply
(In a new dwelling draft proofing is required around all openings including the access hatch to the roof space — this should be insulated, draft — proofed and mechanically fixed)*

5) **Energy efficient lights**
The regulations do not apply to the installation of energy efficient bulbs in existing fittings.
(At least 75% of light fittings to be energy efficient type in a new dwelling)*
If the lighting system is to be replaced however (new wiring etc) then the regulations do apply and application must be made to building control before starting the work. Such work should only be carried out by a suitably qualified electrician.

6) **Renewal energy installations**
This could involve the provision of solar panels, the installation of a geo-thermal heating system, the provision of a wind turbine etc.

The renewal energy equipment itself is not controlled by the building regulations however, in most instances; application must be made to building control since the installation will usually involve a 'structural alteration' to the dwelling. Matters such as the additional loading on the existing structure and how the pipe work will connect to the existing system etc. will have to be considered. In these cases the fee payable is based on the cost of the 'structural alteration' only.

7) **Upgrading heating systems**
There are several aspects that could be involved including the following:

a) **Replacing the boiler**
Such work must comply with the regulations and application must be made to building control except in respect of the replacement of an existing combustion appliance if compliance with the relevant regulations does not require the carrying out of any structural alteration. In reality however, in most instances, a structural alteration is likely to be involved (such as a revised flue arrangement) and consequently an application to building control will be required.
(If an oil-fired boiler is to be provided then a 'condensing type' is necessary in order to meet the minimum 88% efficiency required. However condensing type oil-fired boilers are highly efficient (usually in the region of 94%) and consequently use less oil. An oil-fired boiler more than 15 years old may have an efficiency of only about 65%. Wood pellet boilers are now being specified quite often)*

b) ***Up-dating controls on the heating system***
Generally work such as the provision of thermostatic valves on existing radiators will not require an application to be made to building control but such work should only be carried out by a competent person. If the installation of the controls involves alterations to the pipe work then an application to building control will be required.

(In new dwellings controls must be such that the space heating and the domestic hot water can be controlled separately. Zoning of the space heating is also required. The boiler should be fitted with an anti-cycling device)*

c) **Providing a new or replacement insulating jacket on a hot water storage vessel**
The regulations do not apply.

d) **Replacing the hot water storage vessel**.
The regulations apply and application must be made to building control before starting the work.
(In a typical new dwelling the hot water storage vessel is usually 'factory insulated' to a thickness of 50mm minimum)*

e) **Insulating exposed pipes carrying hot water**
The regulations do not apply.
(In a typical new dwelling all pipes connected to the hot water storage vessel are insulated for a distance of 1m minimum from the vessel — the pipes carrying the domestic hot water are insulated for their entire length)*