Easy Guide for Garage Conversions

CNC BUILDING CONTROL

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This guidance / advice is aimed at Building Notice Applications for garage conversions on particular aspects of the Building Regulations. It is not a statement of law but is intended to help you understand the system.

Foundations

Support will be needed for any new walls constructed to infill the former door opening.

If the original foundations do not continue below the door opening, either:-

1. A new foundation should be provided, the depth of this foundation will depend on the ground conditions on the site and that of the existing foundation (generally between 750mm – 1000mm).

or

2. 2 No. 100 x 150 deep concrete lintols or 2 No. 100 x 110 pre-stressed lintols may be used to span the opening of a single garage door. The ends of the lintols should be cut into the existing brickwork to ensure a minimum end bearing of 150mm,

Walls

Any new wall constructed to fill in the former door opening should be constructed to achieve a U value not exceeding 0.18W/m^2k. Typically wall construction to achieve this would be 100mm blockwork 100mm insulation (depending on blockwork type) 100mm blockwork.

The existing external walls, if solid construction, will require upgrading to ensure a U value of at least 0.30W/m^2k. The work necessary will depend upon the existing construction and the method of insulation you intend to use. You are advised to refer to specific manufacturers literature often on their website for advice on this.

If a new skin of blockwork is used, this should only be supported off the slab if extra lightweight blocks e.g. aircrete are used

Where the garage is semi-detached, sound insulation should be provided to the party wall. Construction as for the external walls above should, in most cases, be sufficient.

If only part of a garage is being converted, both thermal insulation and 30 minutes fire separation must be provided to any new separating walls between remaining garage and new room.

Floors

The existing floor will need upgrading to ensure adequate damp protection and to prevent heat loss.

Damp protection can be provided by either a liquid or sheet membrane. This should link with the damp proof course in the wall. The floor should be insulated to achieve a U value not exceeding 0.25w/m^2K. The thickness of insulation needed to achieve this will depend on the type used; 100mm of polyurethane foam insulation is generally acceptable. The floor finish can be 18mm T & G chipboard or 65mm reinforced screed.

As garage floors are typically 100-150mm lower than the house floor, the build up can usually be accommodated but avoid leaving a small step between adjoining floors as this can introduce a trip hazard.

Pitched Roof/Ceiling

A traditional pitched roof with level ceiling should be insulated to achieve a U value not exceeding 0.16W/m^2K. This can generally be achieved by providing a total of 250-300mm (depending on the manufacturer) quilt type insulation in two layers, the first laid between the ceiling joists and the second laid at right angles over the joists.

The roof should normally be ventilated at the eaves equivalent to an area of not less than a continuous strip 10mm wide and if the roof is a mono-pitch at high level with an equivalent area of not less than a continuous strip 5mm wide.

Flat Roof

Flat roofs are likely to need upgrading to provide adequate thermal insulation to achieve a maximum U value of 0.16w/ m^2K and roof ventilation. Usually, a warm roof construction is the best option.

In some instances, this upgrading can be problematic and you are advised to contact us to discuss this or the manufacturers before work commences.

Windows/Doors

Windows should be draught proofed and double glazed to achieve a U value not exceeding 1.4w/m^2K (e.g. Low E glass and Argon filled) or Window Energy Rating (WER) Band C.

External doors should achieve a maximum U value of 1.4w/m^2K.

If the new door/window is installed within a cavity wall, then insulated damp proof courses should be provided around the opening to prevent cold bridging leading to condensation problems.

Should the new door/window be installed within a solid wall, then insulated dry lining will be required around the opening to prevent thermal bridging/heat loss.

Ventilation

Ventilation openings should be provided to each room. There is no minimum size for kitchens, utility rooms or bathrooms but other rooms require a ventilation opening of at least $^1/_{20}{}^{th}$ of their floor area.

Generally, background ventilation is required to habitable rooms at a rate of 8000mm^2 and to kitchens, bathrooms, WC's and utility rooms at a rate of 4000mm^2.

Suitably sized mechanical ventilation ducted to external air or passive stack ventilation is required to bathrooms and shower rooms (15 litres per second), kitchens (60l/s or 30 if incorporated in a cooker hood), utility rooms (30l/s) and WC's (6l/s).

Internal doors should be provided with a 10mm gap below the door to aid air circulation.

Means of escape in case of fire

Should the new room not lead directly to the hall approaching the front door, the new window should be sized to allow escape. This will require an unobstructed area of 0.33m^2 with a minimum dimension of 450mm high/wide and positioned between 800-1100mm above ground level to the bottom of the openable part of the window.
If the new room formed does not have its own external door, a fire detection and alarm system to BS 5839-6:2019 should be installed to the property.

Electrical

Any new electrics should meet the requirements of Part P of the Building Regulations and be carried out by a competent person.

Others

New rooms should be fitted with a light fitting that will only accept energy efficient bulbs.

Insulation between all building elements should be linked to prevent thermal bridging.

Controls should be fitted to any new heating to prevent undue energy waste.

Note

These details are not intended to show you how to comply fully with the Building Regulations but are produced only as a guide. They show the more common means of achieving compliance with the Building Regulations, but are not the only way to comply.

If you or your builder is not confident in the information/construction required to comply, then professional advice should be sought from an architect or similar.

Usually the best and easiest way to find this information is on the manufacturers websites.

If your proposals differ in any way from these details or you have any queries, you should discuss these with the Area Building Control Surveyor before work commences.

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