



Building Control

Householder Guidance Leaflet No. 6

Garage Conversions

This leaflet is one of a series produced by the Hertfordshire Building Control Technical Forum

Introduction

The conversion of an attached garage into living accommodation is controlled under the Building Regulations so the owner must make an application before commencing the work. The following information gives basic guidance on the issues to consider.

Foundations

A foundation must be provided to carry any additional masonry loads such as a masonry panel infilling the existing garage door opening. The condition and suitability of the existing foundation and floor can be assessed when the door infill area is excavated. In most cases the infill panel needs to be supported on a new foundation complying with the Building Regulations or on suitable beams or lintels spanning between the shoulders of the existing foundations or brickwork either side.

Infilling the Garage Door Opening

This is usually done with a new panel of cavity walling incorporating a damp proof course that is lapped to the damp proof membrane in the floor and to the existing DPC at junctions. The cavity should extend to at least 225mm below the DPC. The masonry must be tied to the existing by tooth bonding or proprietary stainless steel fixing profiles. Alternatively a timber framed panel can be used instead of the inner blockwork skin or both skins of masonry. All infill panels must be durable, weather-proof and adequately thermally insulating.

Structural Adequacy

If the existing wall is single leaf construction with piers, it must be checked for stability and be free from defects. If satisfactory then it is likely the wall would be considered suitable subject to issues raised under the headings of weather resistance and sound proofing. The roof structure must also be assessed for structural adequacy.

New Floor

Various methods of forming a floor are acceptable. The four most popular are: -

- Solid – where levels are made up with a finishing screed and sometimes concrete incorporating suitable insulation and a damp proof membrane (DPM) between layers.
- Floating – Where flooring grade tongued and grooved chipboard is laid with glued joints on a vapour check (polythene sheet) on foam insulant board over concrete as needed for levels and incorporating a DPM
- Suspended Timber – The formation of a traditional floor with joists bearing on wall plates on a damp proof course bedded on honeycomb brick sleeper walls. This is insulated with a suitable material between the joists and the under-floor void needs to be vented with air bricks to outside on two opposing sides (or connected to an existing vented sub floor void)
- Battened Solid – with this technique the timber boarding is fixed onto treated timber battens plugged and screwed into a concrete slab beneath. Insulation can be placed between the battens (fully filling the void) with a vapour check over. It is essential that an effective linked DPM be incorporated with this system.

Weather Resistance

A bare brick wall of single leaf construction must be treated to provide adequate weather resistance. A waterproofing material applied to the inner face and linked to floor damp proofing may be an effective way to achieve this although this does restrict the natural permeation of air through the wall to the outside. The provision of a stud framed or masonry inner leaf to create a cavity wall is another method however such an element must incorporate a linked DPC and must be carefully detailed to form a drained cavity at its base.

Insulation

The thermal insulating properties of elements such as walls, floors and roofs that separate the heated space from an unheated space or outside air need to be upgraded to comply with Building Regulations. Technical Guidance note 10 gives examples of common insulation specifications that comply. When insulating roofs, consideration should be given to providing appropriate ventilation to prevent a problem of condensation occurring within the roof void.

Windows

These should meet the minimum energy efficiency standards. If the new room can only be accessed via another room then a suitable escape window will normally be required. This means a clear opening with minimum height or width dimension of 450mm and area of at least 0.33m² (i.e. 450mm x 733mm). The bottom of the openable area should not be more than 1100mm above the floor. The windows should provide for 'purge' ventilation by having clear openings equal to at least 1/20th of the floor area of the room (one tenth floor area if window opens by more than 15° and less than 30°). The windows can also be used to provide the necessary 'background' ventilation via trickle vents giving at least 5000mm² free area.

Sound proofing

This may be needed to any single leaf walls separating neighbouring garages or properties. An adequate standard can be achieved by forming an additional 100mm dense blockwork lining or an independent studwork wall lined with 30mm total thickness of plasterboard and with at least 35mm of mineral wool quilt between studs. There should be at least 15mm clearance between studs and wall. Additional thermal insulation will be needed where the wall separates the new heated room from an unheated space (see 'insulation' above). Other methods can be used subject to the agreement of Building Control.

Electrical

Electrical wiring is controlled under the Building Regulations. Where the work involves a new circuit or forms a new kitchen, bath or shower room, it is classed as 'notifiable' under Part P of the regulations. The most straightforward route to compliance is by using an electrician who is registered under a government authorised Competent Person Scheme. Otherwise you should check with your local Building Control department for advice on their procedure for checking this part of the work.

Other Considerations

Mechanical ventilation is required to serve any shower rooms, bathrooms utility rooms or kitchens created by the garage conversion. Extractor fans with an appropriate air change capacity can be used. There may be a need to install mains powered smoke detectors in existing circulation spaces (hallways and landings) where none exist and there is no external door to the new room.

Further advice

You can obtain further advice on Building Regulations and garage conversions from the Building Control section of your local council.

Note: *The conversion of a garage into a room may require planning permission whether the garage is integral with the house or detached and you are strongly advised to check with the Local Authority's Development Control section before starting work.*