Loft Conversion Guide

Introduction

This guide is intended to give you guidance on meeting the requirements of the Building Regulations when converting a roof space/loft to a habitable room. It highlights the main areas that need to be considered when carrying out this type of work. It may not include all areas you need to consider and there may be other ways in which the requirements of the Building Regulations can be satisfied. This document only relates to the Building Regulations and does not give guidance on other regularity requirements such as Planning Permission and the Party Wall Act.

For further information of Building Regulations and also related matters contact Building Control on 01543-464507 or visit our website:
www.cannockchasedc.gov.uk

For full information of Building Regulations and other related matters such as Planning Permission and the Party Wall etc. Act 1996, visit:
www.planningportal.gov.uk

Structural implications

In modern houses with truss rafter roofs the inner members (struts) and bracing members will need to be removed to provide a usable space. The alteration of the truss members and bracing will need to be checked by a structural engineer to see if this is possible. If it is, then in most cases additional strengthening works are required.

In older properties the rafters and purlins of a roof structure may be adequate without any further strengthening works. However usually the ceiling joists are not sufficient size to allow for floor loads. In many cases new floor joists can be fitted between the ceiling joists and the existing ceiling is retained.

A plan is required showing structural details and roof members/floor joist layout. If necessary provide structural calculations to justify the design.
Means of escape in case of fire and fire protection measures

To ensure that the stairway will normally remain available as a route of escape in the event of a fire, the existing stair at ground and first floor level and the stairway serving the new second floor level must be enclosed in fire resisting construction (e.g. 12.5mm plasterboard on timber studs 72mm x 37mm (minimum) at 600 centres or masonry walls.) The route must lead to an external door at the foot of the stairs or choice must be available to pass through one of two separate rooms to an external door. This is required so that if a fire occurred in one of the rooms, escape would always be possible through the other.

SEE DIAGRAM 1.

All doors to habitable rooms on an escape route to be replaced with FD20 minute fire resisting doors including any glazing. It may also be necessary to replace or upgrade the existing door frames. **Note:** Door closers are not required.

Alternatively the top storey should be separated from the lower storeys with 30 minute fire resisting construction and provided with an alternative escape route leading to its own final exit. i.e. a second stair, balcony or flat roof leading to a place free from the danger of fire.

In properties with a less traditional room layout, a fire engineering solution may be possible (i.e. sprinkler system)

Any glazing in the fire resisting enclosure of the stairway is required to give 30 minute fire resistance and should be fixed and not openable.

The new loft floor needs to achieve a full 30 minute fire resistance. The existing first floor will need to achieve a modified 30 minute fire resisting standard except to circulation areas (i.e. landings or corridors) which will need to achieve the full 30 minute fire resisting standard.

**Smoke detectors** should be provided in circulation spaces to each floor level of the house including the new loft floor area. The smoke detectors should be mains wired with battery back up. Detectors should be interlinked so if one sounder is activated the remainder will also be activated.

A floor layout plan of each storey is required indicating the proposed fire precautions.
Electrical installations

Electrical installations should be undertaken by a competent person. This means that the works should be undertaken by either of the following:

(i) A electrical contractor who is registered with a competent persons scheme for the electrical works being undertaken
(ii) A electrical contractor who has the relevant qualifications to design, install and test the electrical works being undertaken.

Electricians who are not qualified in the above or D.I.Y persons are permitted to carry electrical works, but their works will require inspection by Building Control and tested if necessary.

We would strongly recommend the use of electricians who are registered with a Competent Persons Scheme.

Stairs

In the first instance a standard staircase should be provided for access to the new loft room(s) where space permits. However in some instances where space is limited and it is not practical to install a standard staircase then there are alternatives such as spiral stairs, alternating tread stairs and fixed ladders.

Headroom to the stairway is an area which can sometimes be difficult to achieve. Headroom needs to achieve at least 2.0m measured vertically between the stair pitch line and the ceiling.

SEE DIAGRAM 2.

However there is a relaxation of this rule to loft conversions.

SEE DIAGRAM 2A.

Sound Insulation

The floor to the new loft room(s) will need to be adequately insulated against sound transmission between the loft room(s) and the room(s) below.

With a few exceptions any new partition walls also need to be adequately insulated against sound transmission.
**Thermal Insulation**

An important part of any extension to a dwelling including loft conversions these days is restricting the escape of useful heat from the building. This will not only keep you warm during cold periods but also reduce the carbon emissions from the building, which harm the ozone layer and therefore you will benefit from lower fuel costs for heating.

Under the Building Regulations heat loss is measured in what’s known as ‘U’ values. There are many ways of meeting the ‘U’ value requirements and you are advised to check with individual insulation manufacturers on the thickness of insulation required to meet the relevant ‘U’ values.

Where roof areas are insulated you also need to control the build up of condensation within the roof void. If your roof tile underlay is one of the modern type breathable membranes then additional ventilation may not be required, but check with manufacturers recommendations. If your roof does not have any underlay then additional vents once again may not be required due to the fortuitous air movement between the tiles. If however your roof is provided with one of the traditional non-breathable underlays, then ventilation of the roof void will need to be considered.

Energy efficient lighting will also need to be considered. Energy efficient lamps will need to be provided to a minimum of 3 per 4 of all new light fittings. Energy efficient lamps means low energy lamps with a luminous efficacy greater than 45 lamp lumens per circuit watt and total output greater than 400 lamp lumens. i.e. fluorescent tubes and compact lamps.