

Building Control Guidance Note	Subject	Supporting joists on external and party walls					024	
	Issued	23/07/03	Rev	A	Page	1	of	2

Introduction

Following changes to part L of the Building Regulations in 2002, it became necessary to find ways to reduce air leakage from the inside of buildings. As a significant contributor to air leakage was found to be the gaps around joists built into external and party walls, the revised Approved Document effectively required that joist hangers should be used instead. Unfortunately, this change has itself led to problems, not least because the use of joist hangers requires the adoption of different methods of working.

Following careful consideration of the issues involved, we will now be prepared to accept that either of the following methods will meet the requirements of Part L –

The use of joist hangers

The hangers used must comply with BS 6178 part 1 1999 or with BS EN 845-1, and must be installed fully in accordance with the manufacturers installation instructions. You should always check the actual requirements for the specific product you are using, but typically these will include -

- The hangers must be of the correct type for the strength of blocks being used.
- The back plates of the hangers must be in contact with the face of the blockwork for the whole height of the hanger, and the hanger itself must be vertical.
- Joists must be accurately cut to length – the maximum overall tolerance is 6mm
- Joists must not be loaded until at least three courses have been built over the flange (and the mortar has set).

Remember that where the wall supporting the joists is over 3m long, special “restraint” type joist hangers (to BS 5628:Part1) are required at a maximum of 2m centres, to provide lateral restraint to the wall itself.

Building-in the joists

Building-in joists will be acceptable provided that –

- The wall itself does not need to meet the requirements of E1 (sound insulation between dwellings etc). It is unlikely that walls with built-in joists would pass the required sound test.
- The joist is accurately cut to length so that while it does not extend into the cavity, it is fully supported by the full width of the leaf into which it is built.
- The masonry is accurately cut to allow an even mortar joint (of between 10mm and 15mm) all the way around the sides and top of the joist.
- The mortar joint is struck or recessed, to allow the later installation of a good bead of silicon mastic between the blockwork and the joist. The silicon mastic bead must be sufficiently generous to cope with any anticipated shrinkage in both the masonry and the timber.
- The blockwork supporting the joists is accurately built to level (using cut blocks if required). Ideally packers should not be used, but slate packers will be accepted provided they are accurately cut to the same width of the joist, have a total thickness of not more than 15mm and are recessed to the same depth as the mortar joint to receive the silicon mastic bead.
- The silicon mastic bead must be installed after both the joists and the masonry are reasonably dry. Ideally this should be done after the roof has been installed.

However, please note that -

- The use of expanding foam products is not acceptable as an alternative to silicon mastic.
- Special arrangements will need to be agreed when using laminated or timber engineered joists as these are often not “square” at the ends. Generally, loose fitting packer pieces fixed in place with silicone mastic can be used to “square” the ends of such joists, but please agree the exact method to be used with your Building Control Officer in advance.
- It is recommended that you notify your Building Control Officer once the silicon mastic has been installed, so that we can confirm this is satisfactory before being covered up.

