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FOR SMART HOMEBUILDERS



GUIDE

## TRADITIONAL BUILD HOMES & MASONRY CONSTRUCTION

The term 'traditional build' is most often used to describe a dwelling where the internal load bearing leaf of the walling is of masonry construction, tied with stainless steel ties to an outer leaf of either block or brick.



## MASONRY CONSTRUCTION VS TIMBER FRAME KITS

Despite the many advantages of timber frame, most homes in the UK and most self built homes use the masonry construction form of building. The most obvious disadvantage to masonry construction relates to the fact that there is very little that can be pre-fabricated off site and therefore the construction process is largely dependent upon the weather. Perhaps this is why in Scotland the situation is reversed, and most new homes are built using a timber frame. Although there are package deal companies dealing in traditional construction, by and large, most self builders opting for this built route choose to go it alone.

## TYPES OF BRICK

Bricks come in many varied forms and colours. Common clay bricks can be used in foundations and for internal load bearing walls. Common concrete bricks are used to course blockwork.

- **Facing bricks** are common clay bricks that have a sand face added to them in order to provide them with a weathering surface. They are only suitable for use within a wall and cannot withstand individual exposure to frost.
- **Stock bricks** are dense clay hard fired bricks that are suitable for most applications and can usually present any face to the weather. Wirecut bricks are similar but are faced on one side and both ends.
- **Handmade bricks** are made from clay thrown by hand into a mould to create the desired creases, known as 'smiles'.
- **Engineering bricks** are very hard bricks that are used in high load bearing situations and in manhole construction. They can also be used as part of a Damp Proof Course and as the capping for a wall.

## BLOCKWORK CHOICES

As with Timber Frame, there are many varied forms of construction. Blocks take many different forms.

- **Dense Concrete Blocks** have a high strength factor and they are therefore used for foundations, external leafs of walls that are to be rendered and for internal load bearing partitions. They do not, however, have a very high insulation value.
- **Lightweight Aerated (Aircrete) Blocks** are suitable for foundations, internal and external leaves of cavity walls, solid walls, internal walls and party walls. They provide a far greater thermal efficiency but usually have to be combined with some sort of insulation either in the cavity or on the internal face, in order to bring the home up to the requirements of the regulations. They can also be used as the infill with a beam and block floor.
- **Thin Joint Systems** have been designed to speed up the build process. Using aircrete blocks engineered to exact sizes, they can be used for all the same applications. The blocks are laid using a proprietary mortar (instead of sand/cement) which is applied using a special scoop or sledge. The system allows a single leaf to be taken up to roof height without waiting for the external leaf matching the speed of timber frame.

There are also thin joint blocks that do away with the need for the cavity, creating a solid wall construction. Most blockwork construction is subsequently rendered on the outside.

## WINDOW AND DOOR OPENINGS

Timber windows and doorframes are usually built in as work progresses using proprietary cavity closers, which maintain the wall insulation and prevent cold bridging. UPVC frames are often put in at a later date, and instead, special cavity closers or formers are built in as work progresses. Lintels are needed to support brick or block work above openings. A cavity tray is essential where there is an abutment to a house and the cavity wall is interrupted. This channels any moisture that might find its way into the cavity through weepholes and harmlessly to the outside.



## TIPS

- If expansion joints are needed in blockwork or facework using concrete bricks, consider concealing them behind downpipes.
- Always keep your bricks, blocks and sand covered when on your site.
- Store cement in a dry place up on pallets.
- Always use the correct lintels and steels as specified by the architect/engineer.
- Stack bricks for use by taking them from a mix of packs in order to avoid problems with slightly different shades or colours.
- If frost threatens, drape hessian over all new work.
- Turn back the first scaffold board at night to avoid mortar being splashed on bricks if it rains.