

**Q** What do each of these buildings have in common?



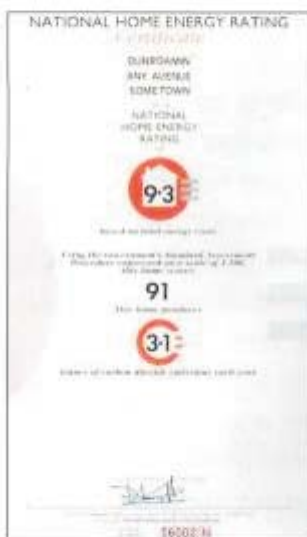
**A** They are all built using the timber frame method of construction

In the UK, the timber used in frame manufacture is obtained from the coniferous forests of the Northern Hemisphere, mainly Scandinavia, North America and Britain. In these areas, proper management of this natural resource has ensured that more trees are planted than are cut down, leaving a net growth in the volume of trees every year. For example, today there is twice as much wood in the Nordic forests than there was 100 years ago and this steady upward trend continues year on year.



**Q How energy efficient are timber and brick houses?**

**A** Because they are so highly insulated, they are extremely cheap to run and are ideally suited to our modern day lifestyles. The house heats up quickly and retains its heat for longer, which is why more and



more housebuilders are turning to timber frame as they understand that purchasers are becoming increasingly concerned about energy and environmental issues.

**Q All this scientific information is all well and good - but what do the people who actually live in them think?**

**A** Jay McAndrew of Hampshire says "Over the years, I have lived in various properties, although my timber and brick cottage has given me the greatest amount of pleasure. Not only is it full of character, but it is so cost effective to heat and requires virtually no maintenance - it's wonderful".

**A** Pat and Arthur Gough of St Michaels, Tenbury Wells in Worcestershire say "We are delighted with our three-bedroom bungalow. Since our retirement seven years ago, it has been a very warm and comfortable home and even though we live in a busy lane with traffic to and from the golf club and hotel, it is quiet and peaceful".



There are over a million timber framed houses in the UK and many thousands more are being built each year. Each one is a quality product that should command a higher price than a property built by other methods.

The reasons are clear and a million people cannot be wrong.

# Timber & Brick

*Simply a much better way to build*

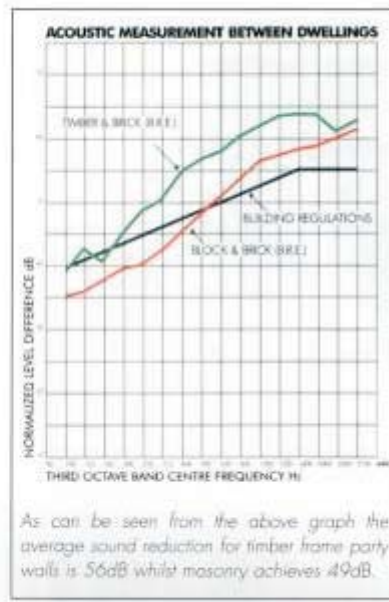
If you would like more information on timber and brick construction please contact:

Timber & Brick Information Council, Gable House, 40 High Street, Rickmansworth, Herts, WD3 1ES or telephone the 24-hour Hotline 01923 778136

only 45 houses out of the 200,000 completed. While that was not perfect it is a 99.9% record, and fully justifies confidence in the method.

**Q What about putting up cupboards and pictures on the walls?**

**A** Generally speaking, as long as the basic safety precautions for DIY activity are followed, there are no special requirements for timber frame walls. Most objects, such as pictures, can be hung on the walls using plasterboard fixings as for any other type of house with dry lining (the majority of modern houses are built with stud walls and



walls. The Building Research Establishment undertook detailed research and concluded in their report;

"If all dwellings had sound insulation as good as that measured in party walls of timber frame dwellings, the problem of noise from neighbours would be greatly reduced".

*“Insurance Companies generally draw no distinction between timber and brick construction and brick/block construction in their premium rate assessment provided the external roof covering is also of tiles, natural or mineral slates or concrete.”*

The Association of British Insurers

dry-lining on the first floor). Heavier objects, such as kitchen cupboards, should be fixed using conventional wood screws, screwed through the plasterboard, directly into the timber frame or onto battens.



**Q What happens if we get noisy neighbours - will the sound travel between the walls?**

**A** In fact, timber and brick party walls are better at providing acoustic reduction than masonry

**Q What about mortgage valuations and insurance - are timber and brick homes regarded as a standard form of construction?**

**A** Yes, the basic criteria for the house to be used as security for a mortgage advance is the same as for any other housing. Insurance premiums are also the same as for masonry houses as timber and brick is a standard form of construction within the UK.

**Q What about the environmental effect of using timber in building?**

**A** We should use more timber in building as it is good for the environment. Growing trees are the lungs of the earth, as through the process of photosynthesis they absorb CO<sub>2</sub> and convert it into life-giving oxygen. Mature trees, however, absorb far less and produce little oxygen. By harvesting mature trees and replanting with young specimens, a constant cycle of CO<sub>2</sub> absorption and oxygen production is ensured.

driven across the cavity, the waterproof membrane covering the timber frame provides complete protection.

Leaking pipes can cause problems with all forms of construction, but as with all building methods, the independent Building Research Establishment (BRE) has undertaken many detailed studies into the performance of timber frame in the long term. A report published in 1993 looked at

*“I am often asked whether there is a difference in value or marketability with regard to timber framed housing and the answer is definitely no”.*

Peter Hales, Chief Executive, Countrywide Surveyors

the moisture conditions in the walls of occupied houses built between 1965 and 1985 and “found no instances of rot caused by water ingress”.

A second report published in 1996 investigated the record of houses built between 1920 and 1975. This report also confirmed the results of the earlier study.

The National House Building Council (NHBC) which provides a 10 year Buildmark warranty on new houses says:

*“The NHBC inspects and insures many thousands of timber frame homes every year. Our claims records actually show that these houses tend to perform better than masonry homes, as more of the dwelling is made under closely controlled factory conditions”.*

Christopher Mills  
Director of Technical Services,  
National House Building Council

**Q What happens if something catches fire in the house - how does timber frame construction perform?**

**A** All houses are built in accordance with strict Building Regulations with respect to performance in fire. In the unlikely event that the timber frame does catch fire, much of its integral stability

will be retained. A BRE fire safety study concludes that timber frame is as safe as other forms of construction, with death or injury no more likely to occur.

Full scale fire tests in accordance with BS476 show that the insulation, integrity and stability of timber and brick houses are far in excess of the requirements of the Building Regulations.

**Q What about bad workmanship on site?**

**A** Bad workmanship can occur on all building sites, whether the properties being built are timber and brick or brick and block.

Due to the fact that a larger proportion of the building is produced under factory conditions a smaller proportion of the work is actually carried out on site in comparison to a brick and block house. The structural timber frame is brought to site in panels. They are designed to be put together in one way only and the majority of timber frame manufacturers utilise their own professional timber frame erection teams to build the structure in the correct manner. They are also inspected in just the same way by the NHBC and Building inspectors. In fact the NHBC itself reports that insurance claims in timber framed housing are so low that they stopped keeping separate records in 1985. In the previous 20 years claims for timber frame involved

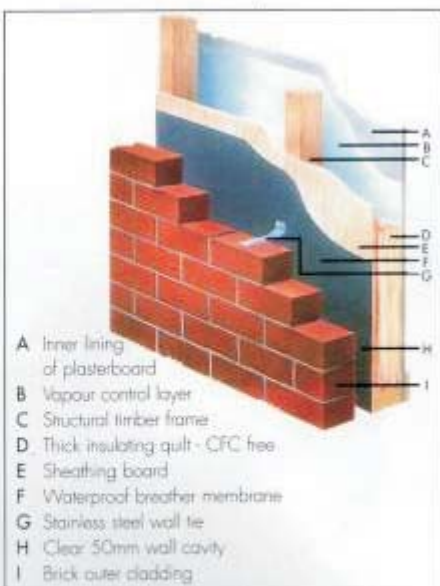
*...the definitive solution*

## Q What is the difference between brick and block and timber and brick construction?

A In modern brick and block houses the external walls of the house are constructed of two leaves - being an internal concrete blockwork wall and an external brick wall. These, together with some of the internal blockwork partitions, support the load and structure of the house.

Using timber and brick forms of construction, the internal leaf of concrete blockwork is replaced by an engineer-designed structural timber frame. The timber frame is then clad by a traditional facing material such as, stone, brick, render or tile hanging. Between the facing material and the structural timber frame there is a permanent cavity which does

not require foam or other forms of filling material to improve thermal efficiency. The timber frame provides the main means of structural support for the house and all cladding materials, with the facing material providing an attractive finish to each elevation.



- A Inner lining of plasterboard
- B Vapour control layer
- C Structural timber frame
- D Thick insulating quilt - CFC free
- E Sheathing board
- F Waterproof breather membrane
- G Stainless steel wall tie
- H Clear 50mm wall cavity
- I Brick outer cladding

Typical cutaway wall section

## Q Is a timber and brick house as structurally strong as alternative methods of construction?

A Timber and brick construction is the most tried and tested form of construction in the UK. Modern timber and brick homes are professionally designed and computer-based manufacturing offers total quality control. The structural engineer produces a full set of calculations to prove that the timber frame will not only support the cladding materials, but also withstand local wind conditions and other exposure factors for the location in which it is to be built.

The structural timbers of each house are precision engineered with stress graded timber in line with the engineers calculations to carry the loads created by the roof tiles/slates, floors and claddings.



18th century timber and brick terrace, Lewes

## Q How long will a timber and brick house last?

A They will last as long as, if not longer, than any other form of construction.

Softwood timber frame houses have been built in increasing numbers since the 19th Century. Indeed, examples of these early designs can be seen all over Southern England. Thousands of these softwood houses are more than 150 years old. Clearly they have stood the test of time. But they also continue to grace estate agents' windows and command high prices; demonstrating more clearly than anything else the long-term investment security of houses built this way.

## Q What about water penetration damaging the timber frame?

A Water penetration can arise from internal sources such as leaking pipes and from external sources such as driven rain.

Because of the cavity between the structural timber frame and the external cladding, any rain that is absorbed by the cladding, is unable to penetrate the timber frame and runs down the cavity and escapes through specifically designed weep-holes. Under extreme conditions, if rain is

# Timber & Brick Homes

Literally hundreds of housebuilders have been building and selling timber framed housing in the United Kingdom for at least 35 years and their track record in that period has been completely successful. In the developed countries of the world, including Sweden, Canada, USA and Japan, more than 70% of all family housing is built using timber frame.

# A Guide for Estate Agents selling Timber & Brick Homes

Some people mistakenly believe that timber frame construction (or timber and brick as it is now known) is only appropriate for a small specialist sector of the construction market. Yet timber and brick construction is used in the UK for buildings as diverse as five-storey blocks of flats, terraced housing, detached houses (of a wide variety of sizes) and indeed, many commercial applications such as nursing homes, offices, hotels, schools and social centres.



Modern Timber & Brick houses are designed by structural engineers utilising computers and the timber frame is manufactured, in factory conditions, under strict quality control systems, to create superior homes that offer excellent thermal efficiency and comfort levels.

This guide has been produced to provide answers to the most commonly asked questions about timber and brick houses.