

# Whole House Timber Engineering

Timber Frame

Solid Timber or Engineered Joists

**Trussed Rafters** 



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#### **COMPANY PROFILE**

Established in 1993, Firwood specialises in the manufacture of Structural Timber Frames. We pride ourselves on the fact that we use the most up to date equipment and technology to run a very efficient operation, as a result, competitive prices and superb service are passed on to our customers.

Because of the flexibility at design stage Architects and Designers can meet all requirements, allowing Firwood to manufacture Timber Frame panels to all sectors of the construction industry:

- Individual dwellings for the self build or builder.
- Development sites.
- Housing Association projects for social housing.
- Commercial buildings such as schools, nursing homes, offices, hotels and student accommodation.
- Single storey to multi storey blocks of flats.

The company's operation involves timber cutting, assembly, and manufacturing on demand. Firwood operate a traditional batch manufacturing process. Our plant and equipment includes computerised saws, automatic advanced production facilities, with framing station and cladding machine.



#### TIMBER FRAME

Timber frame construction is a method of building that relies on a timber frame as a basic means of structural support. They benefit from a precision-engineered structure that remains remarkably strong and durable.

#### • FAST

Timber frame construction requires 20% fewer on-site labour days than masonry construction and ensures a significantly faster construction period overall. This means a faster return on investment, reduced disruption to local communities and tidier, safer and more efficient sites.



#### COST EFFECTIVE

Timber frame is easily cost comparable to traditional brick and block construction methods. According to the National Audit Office report, house builders have the capacity to build one additional house per week with exactly the same cost and resources by simply using a modern method of construction, such as timber frame. Because of the tighter quality control of factory-produced components the need for on-site inspection decreases as the amount of off-site work increases.



#### LOW RISK

There are very few high risks associated with open panel timber frame in comparison to traditional construction methods. Price fluctuations, delays due to bad weather, a lack of key trade skills, service installation faults, health and safety hazards, construction errors and other defects at handovers, are all at a low risk factor.

#### FEWER DEFECTS

The National House Building Council (NHBC) has said that timber frame homes generate fewer complaints in comparison to masonry builds.

#### • HIGHLY MARKETABLE

Contemporary timber frame is becoming increasingly popular amongst design conscious and environmentally aware homebuyers, offering light, airy properties with inbuilt design flexibility and fantastic environmental credentials.



#### THE BEST ENVIRONMENTAL PROFILE

Timber frame has the lowest  $CO^2$  cost of any mainstream building material. For every cubic metre of wood that is used instead of other building materials, 0.8 tonne of  $CO^2$  is saved from the atmosphere and, consequently, every timber frame home saves around 4 tonnes of  $CO^2$ , the amount which is produced by driving around 14,000 miles.

Timber is organic, non-toxic and one of the most naturally renewable building materials. UK timber frame production uses 99% European softwood sourced from certified forests. Three quarters of the energy used in the production of wood products comes from wood residues and recovered wood. Timber frame is a tried and tested building method and very much the eco builder's solution. With one in five new homes now timber frame, this helps the UK save at least 150.000

now timber frame, this helps the UK save at least 150,000 tonnes of carbon a year. Thanks also to a new environmental awareness in the building industry, there has never been so much interest in timber frame.



#### SOLID TIMBER OR ENGINEERED JOISTS

We are able to offer an alternative to standard carcassing joists and I-beams.

easi-joist® metalweb joist system has numerous benefits over other flooring systems. Its open design allows:

- Easier and faster installation of services, reducing expensive site labour
- Less timber used than a traditional floor joist minimising shrinkage and producing a quieter floor
- Site specific joists eliminate waste on site and increased speed of erection
- Integrated design and layout software enables floors to be drawn, engineered, detailed, costed and manufactured from one package
- Easier and quicker installation of floor and ceiling finishes
- Reduced "whole floor" costs compared with other flooring solutions.



#### TRUSSED RAFTERS

Trussed Rafter roofs provide more economic solutions than traditional methods. Trusses are generally spaced at 600mm centres giving economy in the use of timber. Erection procedure is simple and repetitive, requiring only a minimum of skilled labour. Architects and developers have a free rein in forming economic roofscapes.





#### • ZERO CARBON HOMES = A GREEN FUTURE

By 2016, the Government wants to see all new homes being zero carbon. In essence this means homes that are highly energy efficient and insulated, and that draw their total energy use from zero or low carbon technologies. Homes that are zero carbon by 2016 will qualify for a reduction in stamp duty. Housebuilders using a standard 140mm stud timber frame system achieve U-values under 0.30. This means that there are significant carbon savings by the homeowners in the home's day to day use, as well as financial benefits from lower running costs.

The increased demand for low carbon homes has definitely had a positive effect on the timber frame market, and it is now a mainstream method of housebuilding in Wales and England as it has been in Scotland and elsewhere for some time.

Thanks to a new environmental awareness in the building industry there has never been so much interest in what timber frame has to offer.

Timber frame has a well-established supply chain to help the Government meet the demands of the Code for Sustainable Homes, helps to make all levels of the Code both commercially and technically feasible.

With a timber frame structure, and its inherent advantages in terms of the fabric's insulation and air tightness, you're already more than half way to reaching the highest levels.





# We answer your questions . . . .

# Q: Why is a timber frame house different from a masonry house?

**A:** A modern masonry house is normally made of an inner supporting wall of concrete blocks and an outer supporting wall of brick. A modern timber frame house replaces the inner wall with a timber frame strong enough to carry all the loads of the house. This is usually covered by plasterboard internally and a brick or blockwork external finish.

# Q: Are you more at risk from fire in a timber frame house?

**A:** No. In common with all other forms of construction in the UK, timber frame has to meet all Building Regulations. Safety in timber frame is our number one commitment and timber frame has an excellent performance record.

# Q: Will a timber frame home last?

**A:** Yes. A new timber frame home will last as well as any other type of new home. Softwood timber frame houses have been built in the UK since the 19th century and are still going strong. Your timber frame home will still be there for your great grandchildren to enjoy... and beyond.

# Q: Will I get a mortgage on a timber frame home?

**A:** Yes. But don't just take our word for it. the Head of Professional Services at the Halifax Valuation and Surveying Services said: "Halifax takes the view that properly constructed timber frame housing with a suitable external cladding is equally as good as housing which is built in brick or block and we make no differentiation in the lending terms offered on either form of construction".

# Q: Will I have to pay more for insurance?

**A:** No. The Association of British Insurers says "Insurance companies generally draw no distinction between modern timber frame and brick and block construction, provided the external roof covering is also of tiles, natural or mineral slates or concrete."

### Q: Will a timber frame house look different?

**A:** No. Typically, timber frame houses are clad in brick and look like any other house. But a range of materials are suitable, e.g. stone, block and render, or timber boarding.

# Q: Can I still do DIY jobs round my timber frame home?

**A:** Yes. Many jobs are easier, because of the good fixing you can get in the vertical studs. But, as always with DIY activities, you need to follow health and safety guidelines and a few simple rules. If in doubt ask!

# Q: Are timber frame homes quiet?

**A:** Yes. Modern timber frame systems enjoy better acoustic insulation qualities than masonry and fully conform to, or exceed, the latest Building Regulations. So you'll stay on speaking terms with your neighbours (but not through the wall).







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For a free quotation please send in your detailed plans to . . .



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