



The mark of  
responsible forestry







# The benefits of Timber frame

One of the major benefits of timber frame structures is that they are precision engineered, making them incredibly strong as well as being durable.

Our pre-fabricated panels are made in factory conditions in a controlled environment and the precise engineering involved in the process results in very high levels of consistency.

## WALL DETAILS

- 140mm or 89mm CLS stud options
- 9mm OSB
- Reflective external breather membranes

## WALL BENEFITS

- Lower cost insulation between studs, with a range of lambda Values
- Manual or crane erected
- Utilises plasterboard layer for air tightness delivery
- Reduces thermal bridging
- Services accommodated within studwork and insulation zones
- Utilises conventional skills and materials
- Reduces overall wall thickness

# Fast & effective onsite build method

Typically, a three-bed house can be air and water-tight within a working week, from delivery of the timber frame. Thus less damage and waste is likely to occur onsite.

In fact, a four-storey block of flats built with timber frame can save up to 50% on build time, meaning tenants can move in sooner and the return on investment can be realised quicker.

This fast erection time is due to a substantial amount of the construction taking place in the factory, with only final assembly necessary onsite.

This also allows plumbers, electricians etc to get in and work within the building, regardless of the outside conditions, allowing for a more predictable construction schedule.



## INSULATION

Factory fitted - PIR rigid insulation (various thicknesses)

Site fitted - Mineral or fibre glass

Site fitted - Actis Hybris reflective

## FLOOR MAKE UP

253mm metal web joists

22mm P5 weather resistant chipboard + D4 glues to joints

## BENEFITS

Spanning longer

Greater ease of installing of services

Easy to man handle

## TRADE PREFERENCE FOR SERVICES

Timber frame construction allows for the easy concealment of wires and pipes, resulting in a far neater finish to the building. Services can be easily accommodated using our metal web joist systems



# Computer aided design & manufacture

Timber frame is at the forefront of the IT revolution, allowing seamless electronic interaction to take place.

Starting with the architect building in a CAD package, drawings then get sent directly to the timber frame designer.

CAD/CAM is then used to take the building and strip it down into components for manufacture. Once the final design has been agreed, information is sent directly to CAM saws for cutting, ready for assembly.



## NO DESIGN PARAMETERS

Homes built in timber frame have endless possibilities and lend themselves to both repetitive builds and one-off 'grand designs'. It also provides greater flexibility for future adaptations – structural integrity permitting!



## ALL UNDER ONE ROOF

Not only can OFP Timber Frame design and manufacture your timber frame kit, floors, roof trusses and steel frames, we can also manage and erect your project through our in house Contracts management teams.

OFP's sister company, Discovery Stairs, can also provide stairs, door linings, window boards, skirtings and architraves. All coordinated and called off as part of a team effort.



## REDUCED MAINTENANCE

Timber frame is a dry construction method which helps to reduce plaster shrinkage and therefore eliminate cracking of plasterboard. This allows you to get in and decorate immediately after construction, rather than having to wait for it to 'dry out'.

Lower maintenance in the first year of construction is a proven factor, with volume house builders reporting around a 75% saving on call-back costs within the first year after construction.

## THERMAL EFFICIENCY

Timber is a natural insulator and aids reduced energy levels in all buildings.

Timber frame buildings far exceed those built using traditional materials when it comes to thermal efficiency, and also go way beyond Building Regulation requirements without any filling of the cavity.

Further to this, a timber frame building is also economic to run, due to its ability to heat up quickly and retain that heat for longer.

# Environmental benefits

Timber frame has the lowest CO<sub>2</sub> cost of any commercially available building material. For every cubic metre of wood used instead of other building materials, 0.8 tonnes of CO<sub>2</sub> is saved from the atmosphere.

A typical 100m<sup>2</sup>, two-storey detached timber frame home contains 5-6 cubic metres more wood than the equivalent home built using traditional methods.

And the environmental benefits don't stop after construction. The thermal efficiency of timber means that a timber building will remain warmer throughout the winter, reducing heating costs, and will also stay cooler during the summer months.

Our timber is from sustainable sources with full chain of custody.





# The OFP Way



Based on two bed, four person, two storey pair of semi-detached, duo pitched, gable to gable roof

## Our client

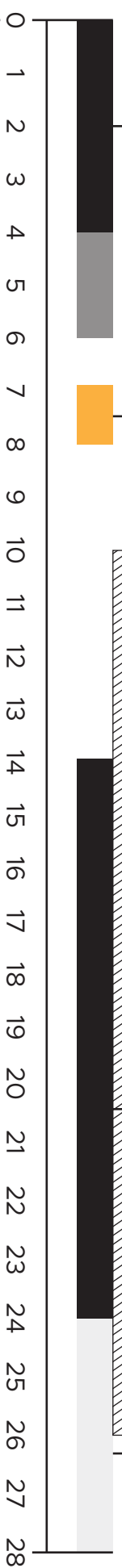
- 1. Start to foundation**
- Site setup (cabins, welfare)
  - Ground prep (oversite & cart away)
  - Setting out (ground survey)
  - Services (water, gas, electric etc)
  - Pull the foundation

- 2. Scaffold**
- Installed prior to timber frame
  - Typical 16 week duration

- 3. External works**
- Roofer
  - 1st and 2nd fix
  - Cladding
  - Windows

- 4. Internal Fitout and completion**

Client Approval



## OFP - What we do

- OFP produce lines and point loads
- OFP draw general arrangements and complete the engineering
- OFP produce and manufacture the timber frame
- OFP contracts team pre-start checks
- Timber frame installed
- Fully managed
- Fully snagged
- Formal handover
- Handover to follow on trades i.e roofer, dry liner, cladding etc.



## FROM START ONSITE TO FOUNDATIONS COMPLETE

6 weeks

Depending on ground conditions (because timber frame benefits from lower loadings, so reduced foundation requirements) there is the potential this 6-week period could be completed in 4-5 weeks.

To actually pull the foundation in itself, you would typically expect around 2 weeks. However, ahead of this would be site set-up (cabins, hoardings, security, welfare, temporary power); ground preparation (oversite strip and cart-away/spoil heaps as required); ground surveying and building setting-out; services into the site/exposed on site accordingly (water; electric/gas; drainage). Depending on size of site and unit types/number of plots, all this could be 2-3 weeks.

## SUPERSTRUCTURE WORKS

16 weeks

(Scaffolding will be erected 4 weeks post supers for duration of 16 weeks): typically, the timber frame superstructure will be erected in 1 wk for a standard pair of 2B4P 2st semi-detached houses, duo-pitched, gable-to-gable roof. Works will then change to external and internal being completed concurrently. Therefore, the build from foundation to decoration should be about 18-22 weeks, depending on size of units, versus the size of contractor/number of sub-contractors.

## INTERNAL FIT OUT

16 weeks

Included for timescale within the 18-22 weeks noted above, due to internal fit-out being completed at the same time as the external works.

## STRUCTURAL ENGINEERING

OFP timber Frame are responsible for the timber frame superstructure engineers, together with the calculation of foundation loadings (line & point loads) imposed from this element down onto the foundation/into the ground. OFP provide these calculations to yourselves and your project engineer accordingly, for their use in designing suitable foundations for respective ground conditions etc. The loadings OFP need confirming in order to produce the timber frame engineers, are any that influence the structure, i.e. roof tile weights; solar panels if applicable; ceiling hoist weights if applicable; false chimney weights if applicable.

Therefore, the overall timescales should be about 28 weeks from start on site to completion of timber frame, compared to 38 weeks for a masonry construction.



## COMPLETED SLAB

The slab is completed prior to the timber frame delivery. A block upstand is typically installed to ensure that the timber frame is 150mm above the ground level.

The substructure is checked to be within tolerance. OFP then install DPC and soleplates.



## SLAB WITH SCAFFOLD



## FULLY ERECTED SCAFFOLDING



The agreed scaffolding should be fully wrapped around the slab prior to the timber frame starting.

## INTERNAL & EXTERNAL WALLS

OFP typically supply and install 140mm external walls and 89mm internal walls.





## FLOOR JOISTS BEFORE 22MM CHIPBOARD



Floor joists in situ and ready for the 22mm chipboard finished floor.

## SERVICE ROUTES WITHIN THE METAL WEB FLOOR JOISTS

We would recommend that before the timber frame design is complete, for the M&E positions be identified, so that we can allow for service runs to be allowed for prior to the manufacture and insulation of the floor joists.



## TRAD DECK FALL ARREST SYSTEM



Trad Deck fall arrest safety system is the most common method of fall arrest prevention.

Trad deck can also be used as a working platform for both the spreading of the roof trusses and helping the roofing contractor to safely felt and batten the roof.



## AIR BAG FALL ARREST SYSTEM



Air bags are a common method of fall arrest. OFP will manage and coordinate the safe use of these.

## TEMPORARY STAIRWELL PANEL



On completion of the floor joists and structural deck, all staircase openings should be fitted with a sacrificial temporary non structural floor panel - to be removed once the staircases are ready to be fitted.



## PRE TACKING OF WALLS

Best practice before the fitting of the staircases is to insulate, apply VCL sheet then pre-tack with plasterboards



## ACTIS INSULATION



Actis insulation is a site fitted product that should be fitted when the structure is water tight.



## WINDOW FITTING



Windows can be ordered well in advance of the timber frame being erected as our window openings are manufactured from the architects window schedule.

Fitting of the windows should be tied back to the timber frame window aperture.

## INTERNAL STUDWORK



Non-load and load bearing Internal walls are constructed with 89mm CLS timber stud and come part of the timber frame package. They will be uninsulated and ready for 1st fix electrics and plumbing.



## STAIRCASES



Staircases 1st fix completed. 2nd fix items such as handrails, balustrade will be supplied but fitted by the main contractor.

## ACTIS INSULATION



Actis insulation will be pressed into each panel aperture and taped together where required.

## DPC TO TIMBER BATTENS



DPC must be also fitted to all window and door apertures prior to the brickwork contractor starting.

## WINDOW FITTING



Windows should be fixed back to the timber frame. No requirements for window and door formers.



## PARTY WALL



Fully sheathed party wall to EWT-2 robust detail. Contractor to insulate and plasterboard at a later date.

## PARTY WALL

EWT-2 party wall robust detail – A1 non-combustible mineral wool insulation to the inner cavity leaf of the party wall panels.





## EXTERNAL INSULATED WALLS



## STEEL RIDGE BEAMS



On occasions where we have room in roofs, we can construct the roofs with loose timbers and beams (cranked steels).

## FINK TRUSS



Roof trusses fully completed together with gable ladders and braced. Ready for roofing contractor to felt and batten.



## HIPPED ROOF



We build hips using a truss solution.

## SOFFIT & FASCIA



Soffit and fascia can also become part of the timber frame package.

## VALLEY BOARDS



Overlaid or inlaid valley board can also form part of the timber frame package.

## DORMER WINDOWS



Dormer cheeks and roofs form part of the timber frame package.



## FIRE SOCKS



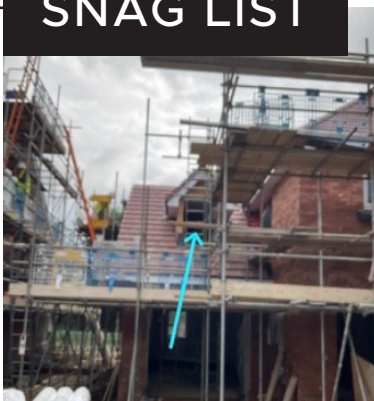
Cavity barriers are installed as part of the timber frame installation - a record is kept throughout the project.

## BAY WINDOWS



Bay windows are detailed during the design phase to suit site requirements.

## SNAG LIST



OFP contracts managers complete and distribute a detailed snag and site document after each visit.

Extract from contracts report



Block 2 (stage 1)  
Roof complete (99%) - follow on trade started  
OSB upstand internal  
Current snag 1F  
Safety deck 2F  
Brickwork (others) started

## PLASTERBOARD SETTLEMENT



The dry liner will account for settlement of the timber frame.



# Bramble Lane

A multi-phased development in the picturesque village of Wye.



**SOME OF OUR  
FINISHED PROJECTS**





# Formal Handover Procedure

Once we finish a plot, we provide detailed handover documents, shown below.

QA - Inspection Record			
Project Name:		Plot No(s):	
Name of person inspecting: OFP Timber Frame /			
Work to be inspected: <b>Timber Frame Inspection - Sole Plates, Floors, pabels &amp; Roof Structure, inc of external/clearance</b>			
LIST OF CRITICAL ITEMS TO BE CHECKED DURING EACH INSPECTION:		YES	NO
<b>Sole Plates</b>			
1.	Check dimensions and diagonals		
2.	Check the level of the plate is completed to within +/- 3mm		
3.	DPCs placed under all sole plated (lapped min 100m)		
4.	Plate should be on the edge of the oversite/block, not more than 12mm overhang allowed		
5.	Plate must not be set back from the slab edge by more than 12mm		
6.	Where gaps occur in level, client must bed under the plate a max 20mm		
7.	If the plate is packed there must be solid support under each stud		
11.	Fixing specification from the timber frame manufacturer is followed		
12.	All rubbish must be cleaned out of the home/area each day and deposited into		
Date;	Signed OFP/Installer;	Signed Site;	
<b>Floor panels &amp; Joist</b>			
13.	Joists are positioned as per drawing		
14.	Correct bearing/blocking/bracing installed		
15.	Hangers are fully nailed and if applicable blocked appropriate		
16.	Joists and floor level are flat/storey height correct		
17.	All floor boarding is fixed in accordance with the manufacturers guidance		
18.	Decking fixed as per specification, glued properly in line with the OFP policy		
19.	Stairwell opening installed as per OFP guidance and stairwell is correct position and size		
20.	Trimming corrects for SVPs (if applicable) and noggins over internal walls		
21.	Where more than 1 property, Firebreaks are installed on PY wall between all dwellings		
22.	Panels fixed together in accordance with the manufacturer's guidance		
23.	Panels are checked for line & level (max deviation +/- 5mm mid height, +/- 3mm top)		
24.	In conjunction with party walls (if applicable) install party wall insulation and protect from		
25.	All rubbish must be cleaned out of the home/area each day and deposited into		
Date;	Signed OFP;		
<b>Roof structure</b>			
26.	Trusses must be fixed vertically at maximum 600mm centres and adequately temporarily braced		
27.	Trusses must be fixed to the wall plate with truss clips fully nailed		
28.	Multiple trusses (girder trusses) must be fixed together in strict accordance with the design		
29.	All trussed rafter bracing must be at least 25mm x 100mm treated softwood/timber		
30.	Longitudinal bracing should be braced to end walls and double nailed to each truss		



**[ofptimberframe.com](https://ofptimberframe.com)**  
T: 01304 613298  
E: [info@ofptimberframe.com](mailto:info@ofptimberframe.com)