



Target Timber Systems

Traditional Values using Modern Methods of Construction

TYPICAL SCHEDULE OF COMPONENTS

~ “Site name” ~

Detached 2 storey, 4 bedroom house with integral garage.

Fully hipped roof, bedroom 1 to have a raised collar profile and hipped end.

~ 142 m2 gross Timber Frame area ~

No materials or labour included for garages, car ports, bin / cycle stores or porches.

This project has been priced using the following panel heights :-

Ground Floor 2.4m
First Floor 2.4m

Insulation type	Typical U value with standard breather paper	Typical value with reflective Protec TF200 membrane
Kingspan TW55 ~ 100mm	0.24	0.21
Kingspan TW55 ~ 120mm	0.22	0.19

The above U values assume brick cladding externally, vented 50mm cavity and standard plasterboard dry lining. A final U calculation can be produced once we know the full wall build up.

Typical information requirements :-

- ① Site plan
- ① Floor plans / layouts to a recognised scale and fully dimensioned for the position of all walls (internal and external), partitions and apertures (windows, doors, staircases).
- ① Positions of key elements such as SVPs, ducts, services risers etc.
- ① Elevations to a recognised scale.
- ① Section details to a recognised scale. If the structure is room in the roof please provide section details for each “profile” and including dormer details.
- ① Ground floor build up.
- ① Window & door schedules (internal and external), please whether you are showing structural openings or joinery finished sizes and give preferred building tolerances.
- ① Roof plan, pitch and details of roof covering.
- ① Details of dormers and rooflights if applicable.
- ① Details of eaves and verges.
- ① Details of external finishes / claddings.
- ① Any special loading requirements for engineering the structure.
- ① Any special site conditions that may affect the way we design, deliver and install the structure (restricted access, limited height restrictions, working hours constraints etc)

Site surveying / dimensioning is the responsibility of the Architect / Main Contractor.

- 1) **DESIGN & ENGINEERING**

Soleplate layouts, wall panel layouts, floor & roof layouts (Timber Frame elements, not full Architectural details).
Section details as necessary for design.
Job specific details as necessary for design.
Full manufacturing drawings and schedules of loose materials.
Line & Point Loads for assisting with design of sub-structure.
Full Timber Frame structural calculations for Local Authority Approval.
NHBC353B certificate provided with kit if required.
- 2) **TIMBER TREATMENT**

To N.H.B.C. standards and Building Regulations.
- 3) **D.P.C TO SOLEPLATE**

Variable width 2000 gauge polythene D.P.C.
(If Hyload is required please inform us at time of order, there may be an additional cost).
- 4) **SOLEPLATE**

Single layer of **38mm thick** treated soleplate to all Ground Floor wall and partitions panels, widths to suit panel frame size.
Supplied to site in long lengths for site cutting.
Cut ends to be sealed with “ensealed” on site.
If Target is erecting the structure, we will pack / shim the soleplates to a maximum of 20mm.
(Slab to be within tolerances of + or - 10mm vertical and + or – 12mm horizontally).
Once the plates are set out and fixed, it is the Main Contractor’s responsibility to grout beneath the DPC to ensure the plates have full bearing on the slab.
- 5) **SOLEPLATE ANCHORS & STRAPS**

Galvanised anchor plates / straps as specified by Timber Frame engineer.
- 6) **FIXING**

“Thru fix” ballistic nails and cartridges as specified by Timber Frame engineer.

- 7) **EXTERNAL WALL PANELS WITH FACTORY FIXED BREATHER MEMBRANE** Assembled panels having **38mm x 140mm** studs at **600mm centres** maximum. Panels faced with exterior quality **9mm OSB** sheathing. Apertures for windows and doors to be pre-formed in panels at factory – please specify head heights on section drawings. (A lintel zone will be required above the window & door heads). Where possible, panel junction studs will be factory fitted, elsewhere they will be supplied loose for site fixing. Junction studs will provide vertical edge fixing for plasterboard lining. Factory fixed **breather paper**, extended to form laps at junctions. (A reflective breather membrane can be offered at an additional cost for an improved U value). Stud positions will be indicated on face of panels.
- 8) **FACTORY FIXED EXTERNAL WALL INSULATION (Priced Separately)** Kingspan TW55 rigid insulation, cut and factory fitted between studs on external wall panels only. (Gable panels will be insulated if they form part of a habitable roof space) Roof, floor, party wall and partition insulation by others.
- 9) **PRE-ASSEMBLED PARTITIONS** Assembled partitions having **38mm x 90mm** studs at **600mm centres** maximum. Apertures for doors to be pre-formed in panels at factory – please specify head heights on section drawings. (A lintel zone will be required above the door heads). Some panels may be factory fitted with OSB / ply sheathing for additional racking resistance, as specified by Target's structural engineers. Where possible, panel junction studs will be factory fitted, elsewhere they will be supplied loose for site fixing. Junction studs will provide vertical edging fixing for plasterboard lining.
- 10) **MID ROW NOGGINS** Factory fitted noggins to load bearing partitions only.
- 11) **EXTERNAL GABLE PANELS WITH FACTORY FIXED BREATHER MEMBRANE** Assembled panels to form gable ends with the same construction as the external wall panels.
- 12) **HEAD BINDERS** 38mm thick treated softwood head binders (width to suit panels) supplied loose to site in long lengths.
- 13) **PARTITION HEAD NOGGINS** Pre-cut to suit standard centres and supplied loose to site for installation team to fit.

- 14) **INTERMEDIATE FLOOR JOISTS** Cut lengths of **240mm Steico** engineered “I” beam floor joists including trimmers, beams, strutting & blockings (and hangers as required). Joists centres as defined by Timber Frame engineer but not exceeding 600mm centres. Panellam header beams as required.
- 15) **INTERMEDIATE FLOOR DECK** **22mm Egger Protect** resin faced **chipboard** structural deck, tongued and grooved on long edges.
Supplied to site in full sheet packs for site cutting and gluing & nailing to joists.
Chipboard supplied to site with an appropriate edge sealing glue which is also used to cover nail heads.

All floors are priced in accordance with standard loadings as described in BS 6399 Part 1 to suit the building classification.

- 16) **INTERMEDIATE LANDINGS** Half space landings are included where joists & trimmers can clear span between two load bearing walls.
Off-set landings will be supplied as loose materials only, we assume they will be supported off storey newel posts.
Quarter space landings are assumed to be provided by the staircase supplier and supported off storey newel posts.
- 17) **STAIR INFILL (sacrificial panel)** Temporary infill panel to provide protection of exposed openings in floors for stairs & lifts.
This is not a working platform.
Removal and disposal by others.
- 18) **POSTS AND BEAMS** All necessary steel or timber posts and beams required to support timber frame only.
Excludes any masonry support.
Where ever practical, Target will design posts and beams so that they are within the wall, floor or roof zones and not visible when the structure is finished. In some instances this may not be possible.
- 19) **TEMPORARY BRACING** Sawn bracing in random lengths for structural stability during erection. To be removed by Main Contractor progressively in conjunction with dry lining.

20) **ROOF TRUSSES**

Pre-fabricated softwood trusses, generally at **600mm centres**, secured at joints with galvanised metal connectors.

All pre-fabricated valley sets, girder trusses, feature gables required to provide the Architect's roof profile are included.

Cutting of plumb and seat cuts to rafter feet by others.

Truss clips, anchors and girder shoes supplied where specified on Timber Frame design drawings.

21) **LOOSE TIMBER TO ROOF**

All loose *structural* timbers including roof bracing. Ridges, hip & valley beams, loose rafters and any purlins supplied in loose lengths for site cutting and fitting.

Where required, valley boards will be 300mm wide plywood overlays fixed on top of the rafters. Cutting of plumb and seat cuts to rafter feet by others.

22) **GABLE LADDERS**

Pre-formed gable ladders to suit.

23) **ROOFLIGHTS**

Trimming materials to form aperture for roof lights only. Rooflights supplied and fitted by others.

24) **DORMERS**

Trim roof structure for dormer windows.

Pre-fabricated dormer cheeks & front panels with roof structure as Architects elevation.

- 25) **CAVITY BATTENS**
(incl loose DPC)
- 38mm x 47mm sawn softwood cavity batten to external window and door openings.
NB) battens are provided to 3 sides of joinery openings only.
Polythene DPC supplied loose for Main Contractor to fix when joinery is fitted, this should improve air tightness.
- 26) **CAVITY BARRIER**
- 65mm polythene wrapped flexible cavity firestop for fixing to timber frame.
TCB supplied to meet current building regulation requirements (eaves fire barrier left loose on site for fixing by others after fascia & soffit).
- NB) Cavity barriers will be supplied to suit a 50mm cavity only.*
- 27) **NAILS FOR SITE**
- Site nails / fixings for installation of Timber Frame structure only.
(Site nails / fixings for installation are not provided on supply only orders).
- 28) **MISCELLANEOUS ITEMS**
- Loose materials including metal work (straps, anchors and hangers) as detailed on schedules & Timber Frame drawings.
Full sheets of OSB / ply for site fixing to provide additional racking, according to design.
Breather membrane for covering floor zones.
Loose timbers, sheet materials that cannot be factory fixed.
- 29) **WALL TIES**
Supply only
- Stainless steel Timber Frame wall ties with nails.
(Fixed to timber frame by bricklayer)

30) **DELIVERY**
(included in supply price)

Provision of 40' articulated delivery vehicles.
If Target cannot gain access for articulated vehicles and a greater number of small rigid vehicles have to be used, any additional haulage costs may be charged.
Delivery of kit to site in full loads to suit the agreed erection program.
(If additional deliveries are required due to items beyond Target's control, we reserve the right to charge for the extra haulage costs).

31) **CRANE HIRE**
(included in erect price)

Provision of mobile crane to off-load / erect the Timber Frame structure.
Maximum **25 tonne** mobile road crane allowed.
If a larger crane or a specialist crane is required due to access issues or limited rigging positions on site, then any additional crane costs may be charged.

32) **FALL ARREST**
(included in erect price)

Provision of a fall arrest system for Target's operatives in the immediate area of their operations.

ERECTION SCHEDULE

(Erector to provide mobile road crane & fall arrest system in the immediate area of the works)

- 1) Check slab levels and tolerances. All in accordance with our Sub structure Pre-erection Checklist. Failure to achieve the tolerances stated in note 3) below, may incur additional costs and delays to programme while the soleplates are packed to compensate – any costs incurred for this additional operation will be passed on by Target Timber Systems.
- 2) Off load & stack all materials to be erected. Supply only materials to be off-loaded & checked by others.
- 3) Set out, pack and fix soleplate and DPC. All cut ends of soleplates to be “ensealed” on site. (Mortar / grout for bedding beneath the soleplates to be supplied and installed by main contractor. ‘Slab’ to be within + or – 10mm vertical tolerance and + or – 12mm horizontally).
- 4) Erect external wall panels and staple all breather membrane laps. Fix any loose junction studs and fix temporary bracing. Bracing to be removed by Main Contractor concurrent with dry lining.
- 5) Erect factory assembled internal wall panels (load bearing and non load bearing), fix any loose junction studs and fix temporary bracing. Bracing to be removed by Main Contractor concurrent with dry lining.
- 6) Cut and fix head binders to all external and internal panels.
- 7) Erect any integral timber / steel columns / beams required to support the timber frame structure.
- 8) Install floor joists, headers, blockings and partition head fixing noggins.
- 9) Cut and fix floor decking by gluing & nailing.
- 10) Fit stair infill panel, removal & disposal by others. (All other floor components fixed by others).
- 11) Erect gable panels where required.
- 12) Erect roof trusses, verge ladders, girders, purlins & loose cut rafters to form the roof structure. Cut & fix valley boards. Fix valley sets, ties, binders and bracing to complete roof structure above Timber Frame.
Cutting of rafter feet and supply & installation of fascia, soffit, barge boards & vents by others.

- 13) Fix dormer cheeks and roof. Trim rafters for rooflights (supplied and fitted by others).
- 14) Fix flexible cavity barrier (TCB) to Timber Frame. (Eaves TCB will be left loose on site for fixing by others once the roofing contractor has fitted fascia & soffit).
- 15) Fix (by nailing) cavity battens to the sides and bottom of the external joinery openings ready to receive DPC and joinery by Main Contractor.
- 16) Place all waste material arising from above in skip / container to be supplied by main contractor.
- 17) Apply our Site Erection Signing off Checklist.
- 18) Target's Timber Frame erecting team will supply any lifting facilities, unless it is agreed that the client / Main Contractor will provide a tower crane free of charge.
- 19) Target's Timber Frame erecting team will provide all necessary hand tools / nail guns etc required to complete their works along with any necessary setting out equipment.
- 20) Target's Timber Frame erecting team will provide a fall arrest system unless otherwise agreed. Any internal scaffold that is required for safe working is to be provided by the client / Main Contractor.
- 21) Target's Timber Frame erectors will provide and ensure wearing of safety helmets, "hi-viz" vests and safety footwear to comply with HSE Requirements.

Cutting away of panel bottom rail / soleplate at doorways is not included in the installation package.

ATTENDANCES REQUIRED BY TARGET ERECTION TEAM

- 1) Unobstructed access to, and hard standing adjacent to, floor slab/foundations for delivery lorries and mobile road crane. (If site conditions dictate the use of a specialist crane, i.e. all terrain, any additional costs will be charged).

Access onto and across the site must be appropriate for the size and weight of the crane and fully loaded delivery vehicle. The details of the hard standing for the crane are to be agreed prior to Target starting on site. Target reserves the right to forward any costs for recovering a vehicle should it 'sink' or become 'stranded' due to inappropriate site access provision. (* see below)*

- 2) Deliveries are generally made on 13 metre articulated trailers, unless specifically quoted otherwise.
- 3) Our erecting team have allowed for a maximum 25 tonne mobile road crane. This usually provides sufficient lifting capacity and a reasonable length of jib to erect most structures. We will require hard standing for the crane along a minimum of 75% of the main elevation of the building and along any side wings of the building. For buildings surrounding a central "courtyard", the most favoured location for the crane will be the courtyard itself to enable the crane to reach all areas of the building. It is imperative that there are no overhead obstructions such as power cables, telephone lines or trees that can interfere with the operation of the mobile crane. (Please note that if special application cranes are required due to site conditions, i.e. 'all terrain' or 'city cranes', then any additional crane hire costs will be charged).
- 4) Any road closures, Council indemnities, stop / go boards (or other traffic control), cones or pedestrian guarding are the responsibility of the Main Contractor or his agent.
- 5) All necessary scaffolding (internally and externally). Internally this may include the provision of 'band stands', hop ups, 'youngmans' & scaffold boards, or in some circumstances scaffold towers, whilst working on or in the roof structure. NB) internal scaffold is particularly required where the roof is vaulted / raised collar and where Target is erecting the roof above a stairwell.
- 6) All necessary attendances to provide a safe working environment should be provided by Main Contractor, details of which will be defined in the contract specific Method Statement. In general terms this may include some raised working platforms internally (see item above) and safety provisions to meet HSE statutory requirements. These items will be required as necessary to ensure a safe working environment for our site operatives.

- 7) Provision of 110v power supply to distribution points around the site (extension leads by Target's erecting team). Safety lighting around site (task lighting will be provided by the erecting team).
- 8) Usual main contractor site welfare / messing / canteen facilities.
- 9) Protection of works. This is to include all materials that have been delivered to site as well as all items that have been erected. Any items of the structure that are to be left as "exposed", such as decorative structural posts, beams, trusses etc, should be protected by the Main Contractor at the earliest possible opportunity.
- 10) Site security.
- 11) Provision of secure storage for miscellaneous materials such as small tools, fixings, DPCs and structural ironmongery.
- 12) Provision and emptying of skips. The erecting team will be responsible for tidying up their own rubbish / waste and placing in a skip near to the works (provided completely free-issue by others).