TECHNICAL UPDATE

TIMBER FRAME REQUIREMENTS

Frame Type A: Open panel *ie. External wall softwood timber stud frame panel with sheathing board and breather membrane on one side only of the standard frame studs with other side open*		
	Frame manufacturer status	**We need this**
A1	**Accredited manufacturer: factory assembled** (Accredited means min requirement of item 1 and 2 in the column right)	1. The manufacturer has STA Gold or Silver, QMark TRADA accreditation, or CATG- Frame Mark confirming (in all cases) there is ISO 9001 quality control systems in place for the materials supply, design and manufacture of the frame, and trained, competent installers erect the frames, **and** 2. The STA Gold or Silver OR QMark OR Frame Mark award must confirm the manufacturer is assessed for design and manufacture of timber frame panels (Note: STA/TRADA/CATG certificate for trusses/joists only is not deemed sufficient for acceptance of the timber frame), **and** 3. The warranty surveyor will collect the timber frame wall panel structural design calculations for each building/ house type, **and** 4. The developer must satisfy the warranty surveyor that the materials/products used are suitable and meet the requirements of the LABC Warranty Technical Manual (eg. timber treatment, tolerances, etc.)
A2	**Non-accredited manufacturer: factory assembled** (Non-accredited means: timber frame manufacturers who are not accredited with STA, BM TRADA or CATG)	1. Have a valid LABC Warranty Innovations Team system acceptance, **and** 2. We require: • A current ISO 9001 accredited process in place for the materials supply, design and manufacture of timber frame wall panels (not trusses or joists only) and trained, competent installers erect the frames, **and** • The structural design calculations for each site for each building /house type **must be endorsed** by a qualified structural engineer experienced in timber frame construction confirming the design meets Eurocode 5 (BS EN 1995-1-1:2004+A1:2008), **and** • The warranty surveyor will collect the timber frame wall panel structural design calculations for each building/house type, **and** • The Developer must satisfy the warranty surveyor that the materials/products used are suitable and meet the requirements of the Technical Manual (eg. timber treatment, tolerances, etc.) **Notes**: the above A2 is only applicable until 1st September 2021 and during this transition period: a) If none of either 1 or 2 above, then the project is **limited to 5 plots** and the '**one-off site assembled timber frame'** route is to be followed **(Frame Type E).** b) If the manufacturer is in process of being assessed by the Warranty Innovations team, OR is lodged and awaiting assessment by STA for Silver or Gold, adopt the 'one off timber frame route' and update warranty when achieved to change to Frame Type A1.) From 1st September 2021: all non-accredited manufactured systems will not be acceptable. Manufacturers are encouraged to gain certification as A1 above as soon as possible and before 1st September or have lodged and awaiting final assessment as b) above.

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TIMBER FRAME REQUIREMENTS

Frame Type B: Partially closed panel

ie. external wall softwood timber stud frame panel with sheathing board and breather membrane on the 'external' side of frame, insulation between the studs (installed during factory assembly) ***and a transparent vapour control layer*** *secured over the 'inside' face of the panel*

	Frame manufacturer status	We need this
B1	**Accredited manufacturer factory assembled** (Accredited means min requirement of item 1 and 2 in the column right)	1. The manufacturer has STA Gold or Silver or QMark TRADA accreditation, or CATG Frame Mark confirming (in all cases) there is ISO 9001 quality control systems in place for materials supply, design and manufacture of the frame, and trained, competent installers erect the frames, **and** 2. The STA Gold or Silver OR QMark OR Frame Mark award must confirm the manufacturer is assessed for design and manufacture of timber frame panels (STA/TRADA/CATG certificate for trusses/joists only is not deemed sufficient for acceptance of the timber frame), **and** 3. The warranty surveyor will collect the timber frame wall panel structural design calculations for each building/house type, **and** 4. The developer must satisfy the warranty surveyor that the materials/ products used are suitable and meet the requirements of the Technical Manual (eg. timber treatment, tolerances, etc.) **And in addition to 1 -4 above:** 5. The VCL **must be** transparent to allow warranty surveyor to easily inspect the construction make up to confirm it meets warranty requirements. Please note: It may be necessary to open up the construction if full inspection cannot be achieved.
B2	**Non-accredited manufacturer – factory assembled** (Non-accredited means: timber frame manufacturers who are not accredited with STA, BM TRADA or CATG)	1. Have a valid LABC Warranty Innovations Team system acceptance, **and** 2. We require: • A current ISO 9001 accredited process in place for the materials supply, design and manufacture of timber frame wall panels (not only trusses/joists, etc.), and trained, competent installers erect the frames, **and** • The structural design calculations for each site for each building/house type **must be endorsed** by a qualified structural engineer experienced in timber frame construction confirming the design meets Eurocode 5 (BS EN 1995-1-1:2004+A1:2008), **and** • The warranty surveyor will collect the timber frame wall panel structural design calculations for each building/house type, **and** • The developer must satisfy the warranty surveyor that the materials/ products used are suitable and meet the requirements of the Technical Manual (eg. timber treatment, tolerances, etc. **And in addition to 1 or 2 above:** • The VCL must be transparent to allow warranty surveyor to easily inspect the construction make up to confirm it meets warranty requirements. Please note: It may be necessary to open up the construction if full inspection cannot be achieved.

		Notes: The above B2 is only applicable until 1st September 2021 and during this transition period: a) If none of either 1 or 2 above, then the project is **limited to 5 plots** and the '**one off site assembled timber frame'** route is to be followed **(Frame Type E).** b) If the manufacturer is in process of being assessed by the Warranty Innovations Team, OR is lodged and awaiting assessment by STA for Silver or Gold; adopt the 'one off timber frame route' and update warranty, when achieved to change to Frame Type A1.) Post 1st September 2021, all non-accredited manufactured systems will not be acceptable. Manufacturers are encouraged to gain certification as A1 above as soon as possible and before 1st September or have lodged and awaiting final assessment as b) above and provide evidence of such application.

Frame Type C: Fully enclosed panel

*ie. external wall softwood timber stud frame panel **(not including the external wall finish cladding**) with:*

- *Sheathing board and breather membrane on the 'external' side of frame and*
- *Insulation between the studs installed during factory assembly and*
- *A 'Non' transparent vapour control layer secured over the 'inside' face of the panel and*
- *Plasterboard inner finish installed and*
- *Window / door frames may be pre-installed*
- *A drained and 'ventilated cavity ' will be provided*

	Frame manufacturer status	**We need this**
C1	**Accredited manufacturer factory assembled** (Accredited means min requirement of item 1 and 2 in the column right)	1. The manufacturer has STA Gold or Silver or QMark TRADA accreditation, or CATG Frame Mark confirming (in all cases) there is ISO 9001 quality control systems in place for materials supply, design and manufacture of the frame, and trained, competent installers erect the frames, **and** 2. The STA Gold or Silver OR QMark OR Frame Mark award must confirm manufacturer is assessed for design and manufacture of timber frame panels (STA/TRADA/CATG certificate for trusses/joists only is not deemed sufficient for acceptance of the timber frame), **and** 3. The warranty surveyor will collect the timber frame wall panel structural design calculations for each building/house type, **and** 4. The developer must satisfy the warranty surveyor that the materials/products used are suitable and meet the requirements of the Technical Manual (eg. timber treatment, tolerances, etc.) **And in addition to 1-4 above:** 5. The timber frame wall panel manufacturer must provide the Innovations Team full design pack including material specification of the system, a declared design sheet detailing the make-up of the wall panel construction, including full details of each element that is being used, to confirm it meets the Technical Manual requirements.

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TIMBER FRAME REQUIREMENTS

C2	**Non accredited manufacturer – factory assembled:** (Non-accredited means: timber frame manufacturers who are not accredited with STA, BM TRADA or CATG)	1. Have a valid LABC Warranty Innovations team system acceptance **and** 2. We require: • A current ISO 9001 accredited process in place for the materials supply, design and manufacture of the timber frame wall panels (not trusses/joists only, etc.) with trained, competent installers erect the frame, **and** • The structural design calculations for each site for each building/ house type **must be endorsed** by a qualified structural engineer experienced in timber frame construction confirming the design meets Eurocode 5 (BS EN 1995-1-1:2004+A1:2008), **and** • The warranty surveyor will collect the timber frame wall panel structural design calculations for each building/house type, **and** • The developer must satisfy the warranty surveyor that the materials/products used are suitable and meet the requirements of the Technical Manual (eg. timber treatment, tolerances, etc.) **In addition to 1 or 2 above:** • The timber frame wall panel manufacturer must provide the Innovations Team for the specific project a declared design sheet detailing the make-up of the wall panel construction, including full details of each element that is being used, to confirm it meets the Technical manual requirements.

Frame Type D: Fully enclosed panel but with external cladding also installed at factory

ie. external wall softwood timber stud frame Panel with:

- *Sheathing board and breather membrane on the 'external' side of frame, and*
- *Insulation between the studs installed during factory assembly, and*
- *A vapour control layer secured over the 'inside' face of the panel, and*
- *Plasterboard inner finish installed, and*
- *Window/door frames may be pre-installed*
- *A drained and 'ventilated cavity ' will be provided*
- *External wall finish cladding in place but junctions between panels completed on site*

	Frame manufacturer status	**We need this**
D1	All timber frame manufacturers (accredited or non-accredited)	**The wall panel system will only be acceptable if a valid LABC Warranty Innovations Team acceptance has been issued.** Note: Fully enclosed panels must comply with requirements of external wall panels (see C1) and must have a drained and ventilated cavity behind the external cladding finish and a breather membrane as a second line of defence. **Cavity-less constructions are not acceptable for warranty.**

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TIMBER FRAME REQUIREMENTS

Frame Type E: Stick frame, or 'One off site assembled timber frame' *Formerly known as bespoke timber frame* *Limited to maximum 5 plots*		
	Frame manufacturer status	**We need this**
E1	Systems built on site, ie. not made in an offsite factory	The developer must: • Provide full structural design calculations for each house type, confirming the design meets Eurocode 5 (BS EN 1995-1-1:2004+A1:2008), **and** • The design accounts for any fixed non timber components (e.g. sheathing boards, claddings, parapets, junctions with other structures) which may impact on the stability if shrinkage of the frame is not accounted for, **and** • An **independent engineer** (not the design engineer) must inspect the plot once erected and prior to covering over (to allow full inspection) and provide a sign off statement at completion of the waterproof shell confirming that the timber frame construction meets the Eurocode requirements and is erected as per manufacturers' design, **and** • The warranty surveyor will collect the timber frame wall panel structural design calculations for each building/house type, **and** • The developer must satisfy the warranty surveyor that the materials/products used are suitable and meet the requirements of the Technical Manual (eg. timber treatment, tolerances, drained and ventilated cavity, etc.) **Please note**: This is limited to a maximum of 5 plots per project.

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TIMBER FRAME REQUIREMENTS

Frame Type F: Engineered timber frame *eg. twin wall, I Joists, modular homes and MMC derived construction*		
	Frame manufacturer status	**We need this**
F1	Systems built in factory	Full Innovations Team system acceptance required, **AND** 1. The manufacturer has STA Gold or Silver, QMark TRADA accreditation, or CATG Frame Mark, confirming (in all cases) there is ISO 9001 quality control systems in place for the materials supply, design and manufacture of the frame, and trained, competent installers erect the frames, **and** 2. The STA Gold or Silver OR QMark OR Frame Mark award must confirm the manufacturer is assessed for design and manufacture of timber frame panels (Note: STA/TRADA/CATG certificate for trusses/joists only is not deemed sufficient for acceptance of the timber frame), **and** 3. The warranty surveyor will collect the timber frame wall panel structural design calculations for each building/house type, **and** 4. The developer must satisfy the warranty surveyor that the materials/ products used are suitable and meet the requirements of the Technical Manual (eg. timber treatment, tolerances, etc.)
F2	Systems built on site ie. not made in an offsite factory environment	**Not acceptable**

Frame Type G: SIP panel construction *ie. structurally insulated panels*		
	Frame manufacturer status	**We need this**
G1	SIP systems manufactured in factory by a third party product approval certificate holder (the SIP manufacturer)	• The SIP panel system must have valid full third party product approval (BBA/BDA/similar) • Installation must be in strict accordance with third party certificate • A breather membrane will be required to provide a second line of defence behind the cladding and cavity • A drained and ventilated cavity is required • Installation on site must be by the SIP manufacturer's approved installers
G2	SIP panel manufactured in factory by a third party product approval certificate holder (the SIP Manufacturer) **BUT** is: • Marketed under another brand name	• The SIP panel system must have valid full third party product approval by the original 'SIP manufacturer' • That 'another company' must be authorised by the original third party approved SIP manufacturer to be licensed to undertake such alterations to, and the erection/installation of the panels – in order to be covered by the third party product approval

	by 'another company', **and** • Openings formed by 'another company', **and** • Processing company (design, assembly, alteration carried out off-site by 'another company' not third party certificate holder • Erected on site by 'another company'	• The 'another company' should hold the STA Gold or Silver, QMark TRADA accreditation, or CATG Frame Mark confirming (in all cases) there is ISO 9001 quality control systems in place for the materials supply, design and manufacture of the frame, and trained, competent installers erect the frames • A breather membrane will be required to provide a second line of defence behind the cladding and cavity • A drained and ventilated cavity is required **Notes:** • A SIP panel system not covered by a valid third party product approval: Will not be acceptable for warranty projects • A SIP panel system marketed, altered and erected by 'another company' who are not authorised by the original 'SIP manufacturer' will not be acceptable for warranty projects

Third party certification (3rd party) acceptable for warranty purposes is British Board of Agrement (BBA)/KIWA BDA/BM TRADA/body accredited by UKAS or by its European equivalent which is signatory holding ILAC MRA Mark:

All products should be assessed against following:

- *Strength and stability*
- *Serviceability of product*
- *Safety in case of fire*
- *Hygiene, health and environment (incorporating:*
  - *a) Vapour permeability and moisture resistance*
  - *b) Water tightness*
  - *c) Release of dangerous substances*
  - *d) Safety in use*
- *Sound insulation*
- *Thermal performance, air tightness and movement characteristics*
- *Durability*

All timber frame systems must also comply with LABC Warranty Technical Manual requirements. Requirements will include the need for structural timbers to be treated and that provision for ventilated and drained cavities are provided.

Every care was taken to ensure information in this article was correct at the time of writing (March 2021). Guidance provided does not replace the reader's professional judgement and any construction project should comply with the relevant building regulations or applicable technical standards. For the most up to date LABC Warranty technical guidance please refer to your risk management surveyor and the latest version of the LABC Warranty Technical Manual.