

Building Safety



STA Annual General Meeting

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STA Strategic Objectives 2024 – Key Priorities

To ensure that Structural Timber is seen by the construction market as a safe building technology.

Product Check:

Only fire resilient elements used by our members

Best Practice:

Case study & demonstrator projects communicated

Fire Testing:

Ensure association has minimum requirements tested

Building Safety Act:

Education of members to ensure compliance

Technical Authority:

Technical webinars to communicate latest updates & information

Member Technical Communications:

Regular communication & feedback with the membership

Product Check

Product Check

- STA Fire Research Pattern Book, Volume 1.
- Assessed by a UKAS laboratory as being suitable and fit for purpose.
- Tested by the member to either BS476 or EN1365
- Designed and checked for acceptance adopting EN1995-2 - 2009 and checked against the prEN1995-2 2023 or latest edition.
- A whole house test carried out by a recognised body such as BRE, Effctis and Warrington Fire.
 - * BS476 is not recommended and may be withdrawn as an acceptable standard in the near future.



Product Check – Time Scales

Fire tested elements

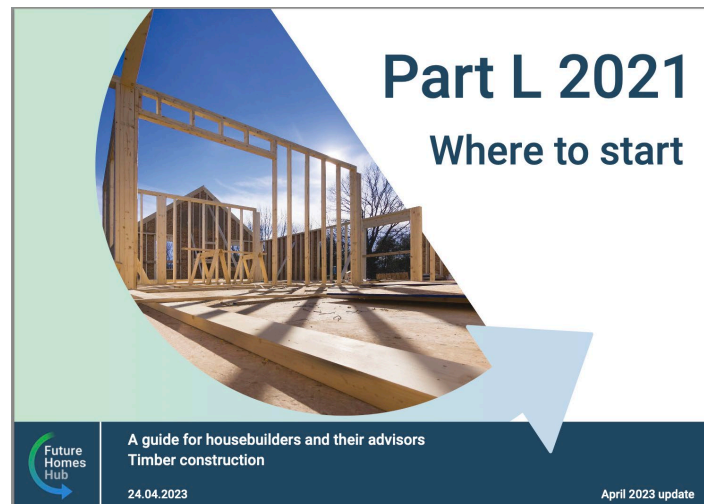
- Supporting guidance documents by end of June
- Included in STA Assure Audit from July
- Go Live Jan 2025 whereby the STA Assure Audit will have a weighted score for compliance

Insert cool timber frame kit
pic under construction

Best Practice

What STA are doing?

- Engagements
 - Scottish Building Standards
 - DLUHC engagement
- Eurocode 5 Racking
- Eurocode 5 Floor deflection
- Future Homes Standards
- Psi Value calculation de-mistified
- Durability and moisture management
- Cavity Barrier Guidance – Fire research Volume 2
- Case studies and Demonstration Projects as evidence – we need your help



U-values: external walls

U-value	Additional notes	Wall thickness	1.	2.	3.	4.	5.	6.	7.	8.
0.19 W/m²K 15% baseline Timber Fraction (TF) [0.19 W/m ² K @ 12% TF] [0.20 W/m ² K @ 18% TF]	Internal service void formed by 25mm battens, reflective VCL and fully filled with mineral wool insulation (λ = 0.032 W/mK).	342 mm	Plasterboard 15mm	Service void 25mm formed by timber battens	VCL / air tightness layer	PIR over boarding insulation	Mineral wool insulation (λ = 0.032 W/mK) fully filled between 140mm studs*	Sheathing board with reflective low-e breather membrane**	Minimum 50 mm clear cavity	100 mm brickwork
0.17 W/m²K [0.17 W/m ² K @ 12% TF] [0.18 W/m ² K @ 18% TF]	Internal service void formed by 25mm battens, VCL**, 25mm PIR over boarding, fully filled with mineral wool insulation (λ = 0.032 W/mK).	367 mm								
0.15 W/m²K [0.15 W/m ² K @ 12% TF] [0.15 W/m ² K @ 18% TF]	Internal service void formed by 25mm battens, VCL**, 40mm PIR over boarding, and fully filled with mineral wool insulation (λ = 0.032 W/mK).	392 mm								
PIR insulation										
0.19 W/m²K 15% baseline Timber Fraction (TF) [0.19 W/m ² K @ 12% TF] [0.20 W/m ² K @ 18% TF]	No service void, VCL, 120mm PIR insulation between 140mm studs.	317 mm	Plasterboard 15mm	Service void formed by timber battens	VCL / air tightness layer	PIR over boarding insulation	140 mm studs with PIR insulation (λ = 0.022 W/mK)*	Sheathing board with low-e breather membrane	Minimum 50 mm clear cavity	100 mm brickwork
0.17 W/m²K [0.17 W/m ² K @ 12% TF] [0.18 W/m ² K @ 18% TF]	Internal service void formed by 25mm battens, VCL**, 25mm PIR over boarding, 90mm PIR insulation between 140mm studs.	367 mm								
0.15 W/m²K [0.14 W/m ² K @ 12% TF] [0.15 W/m ² K @ 18% TF]	Internal service void formed by 25 mm battens, VCL**, 25mm PIR over boarding, and 120mm PIR insulation between 140mm studs.	367 mm								

* Must be installed to full thickness (mineral fibre) and without any gaps. Should there be gaps with PIR these should be foam filled.
 ** VCL: Foil faced PIR over boarding insulation with foil taped joints to create continuous VCL.
 *** Reflective breather membrane (R=0.70m²W) to provide increased airspace resistance in the cavity to the external leaf.
 Note 1: Lower U-values may be achievable using higher performing products, materials and thicker over boarding.
 Note 2: The STA pattern book of solutions forthcoming update in the Autumn 2022 is to address the fire compliance of the wall make ups presented.



Fire Testing – EN1365 Furnace test

In the last 15 months

- PIR over stud
- Different Glass Wool types
- Outside in x3
- Cavity Barrier testing
- Addition of floor test data into Vol 1

- Volume 1 now has 24 completed successful element tests
 - Different plasterboards
 - Different PIR boards
 - Different Panel Configurations
 - 2.7 and 3.0 metre heights

- Floor to wall junctions



Building Safety Act

The Building Safety Act 2022 represents a monumental shift in the regulatory framework governing the UK's construction industry.

Its core objective is to reshape the industry's culture and practices to make sure building safety is a paramount concern on all projects.

The Golden Thread



Building Safety Act

Just in case you didn't spot the theme

Who might be accountable?

All of you!

AND

Expect this to be applied to all projects not just High Risk at some point soon.



Technical Communications and Technical Authority

- Bi Annual Technical Conferences - (Next one May 21st Salford)
- Monthly Webinars
- Monthly Newsletters
- Engagement with the Building Safety Regulator on changes to Part B England/Wales (3 tests)
- NHBC Standards updates

The fulltime appointment of a new role -STA Technical Director

Table B3 Specific provisions of the test for fire resistance of elements of structure, etc.

Part of building	Minimum provisions when tested to the relevant European standard (minutes) ⁽¹⁾	Alternative minimum provisions when tested to the relevant part of BS 476 ⁽²⁾ (minutes)			Type of exposure
		Loadbearing capacity ⁽³⁾	Integrity	Insulation	
1. Structural frame, beam or column.	R see Table B4	See Table B4	Not applicable	Not applicable	Exposed faces
2. Loadbearing wall (for a wall which is also described in any of the following items, the more onerous guidance should be applied).	R see Table B4	See Table B4	Not applicable	Not applicable	Each side separately