Timber Frame Solutions For Low Carbon Economy

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I will cover

• The B word –
• The S word –
• The F word –
• The Cd word -
But First - What is the STA?

• Structural timber frames within UK building industry

• 250+ member companies from across the entire supply chain
How we work

• Committees made up of industry experts in including:
  • Technical (Inc. Fire Safety)
  • Health and Safety
  • Education and Training
STA OBJECTIVES

1. To promote
2. To increase uptake
3. Raise the bar
4. Show membership value
5. Provide support

Address sustainability

quality, innovation, health & safety, skills & training, technical knowledge and customer service
TIMBER FRAME Buildings for accommodation
Structural Timber Buildings
What buildings must achieve

• Building Regulations
Low carbon economy & buildings
Low Carbon and Sustainability
Sustainability

Environmental Benefits

Grows naturally and is renewable

Embodied effects relative to the wood design across all measures

Normalized to wood value = 0.75

- Air Pollution
- Solid Waste
- Resource Use
- Energy
- GWP
- Water Pollution

Photos: naturallywood.com

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What buildings must achieve

• Building Regulations
Energy loss in the home

Windows/Draughts 25%
Roof 25%
Walls 35%
Floor 15%
Fabric First
Build system

Speed - Product integration
Thermal Efficiency

1) Element thermal insulation – $U$ value

2) Thermal Bridging – $psi$ values

3) Thermal By pass

4) Airtightness

5) Holes left by follow on trades
So what are the Structural Timber Solutions?

Walls

Stud timber frame
Closed panel
Solid panel
Structural Timber Solutions
The basic - Open timber frame panels
Structural Timber Solutions

Closed panels

- Sheathing both sides
- Insulation behind boards
- Plasterboard
Structural Timber Solutions
Solid wood Panels

Exposed timber
Insulation On outside
CLT
Key areas of heat loss

- Foundation junction
- Floor junction
- Roof junction
- Windows junction
We have solutions
Walls to foundations
cladding option

- timber wall option
- internal finish

screed
- RC Slab
- insulation layer
- compacted sub base
Floor to wall – air/thermal loss

Make sure that the VCL around the floor frame will be able to lap onto the VCL for the walls.
Roof zones

Make sure that the VCL around the wall to the roof lap.
Tapes
Factory Fitted Windows
STA -- Joined Up Solution
STA member part of the team
Beware of the !!!
Advanced thinking!

• No more isolated supply
• No more being left out of the design chain
• No more being procured out of the market
In summary – timber frame is
THANK YOU
For Listening