



Roof Truss Installation Guidance

This is a step-by-step guidance on the safe installation of traditional factory fabricated roof trusses, the guidance below can be used for both detached and semi-detached standard core house types of truss rafter construction however it does not cover guidance for plots of cassette roof installation. Please speak to your respective Site Manager and/or Supervisor for this information prior to commencement of such roof types.

Truss Install Methodology and Sequencing

Before you begin

- Check that the trusses to be installed have been lifted and laid in to the required position flat on the wall plates.
- Ensure the competencies of the joiner(s). The installation of trussed rafters should only be undertaken by suitably experienced and qualified personnel, such as those with a Level 2 Diploma in Site Carpentry possessing a CSCS skilled (blue) card. NOTE: the install of each truss should involve at least 3 individuals with at least one being a joiner.
- Check and read all assembly drawings and information provided by the truss supplier.
- Check that all temporary works drawings and information is available and understood by the Joiner.
- Check that all wall plate straps are in place and fixed.
- Ensure all personal protective equipment (PPE) is worn and correctly fitted.
- Ensure scaffolding is in place and signed off.
- A safe working platform within the structure is also provided.
- Where bracing is required to be attached at the top of the trusses, a 'truss-safe' access ladder should be used.
- Ensure hop-ups and scaffolding edge protection are in place.
- After reading the truss layout drawings, identify the easiest starting point using the simplest roof of trusses.
- Check the weather forecast for projected wind speeds and ensure that a working anemometer is available. The Work at Height Regulations specifically require weather conditions to be considered when planning any work. Wind loading presents a particular risk for trussed rafters that are not installed and fully braced. Roof installation activity involving components greater than 5m long should cease when the mean wind speed reaches 17 mph (gusting to 26 mph or over).

Note – the following methodology and sequencing (safe system of work) whilst considered safe and practicable is by way of example. Whatever methodology, sequencing, bracing and fixings are used, it must be reviewed and approved by a temporary works designer.

Step 1	• <u>Pre – erection</u> – a scaffold table lift to be erected in accordance with a temporary works design in preparation for receiving and fixing the first truss. • Alternate bay ledger bracing is to be fitted with a third guardrail.	
Step 2	• 1st truss placed up onto wall plate adjacent to table lift and held in place to commence securing into position. Check overhang at each wall plate and ensure truss is vertical. • Do not lean the truss against the table lift	
Step 3	• Trussed rafters are fixed to the wall plate using nails or using proprietary truss clips as specified by the TW bracing schedule.	

Step 4	Fix a temporary horizontal member to the face of the trussed rafter. It's height, size and fixings should be in accordance with the Temporary Works design.	
Step 5	Brace the truss to the table lift. Truss is plumbed and bracing timbers are to be added from the table lift to the temporary horizontal brace. Both ends of bracing timber secured by the appropriate numbers of screws / nails as per Temporary Works design.	
Step 6	- Second Truss is placed up onto wall plate adjacent to first truss and held in place to commence securing into position. Check overhang at each wall plate and ensure truss is vertical. - Trussed rafters are fixed to the wall plate using the requisite nails or using proprietary truss clips - Lateral temporary bracing structural timbers, are added to each side, keeping the brace as close as possible to the horizontal brace on the first truss. Each piece not less than 2100mm long allowing fixing to a minimum of four trussed rafters. - The temporary braces can be prepared with a nail at each 600mm centre which is fixed to each truss it crosses. - Operatives can release truss once both horizontal bracing timbers are fixed. - Further truss is then located in to position on the wall plate, plumbed up and secured to the previous truss by lateral temporary bracing applied to each side of the trusses each piece not less than 2100mm long allowing fixing to a minimum of four trussed rafters. - NOTE: Temporary bracing is affixed to outer face of truss rafters while permanent bracing is fixed to inner face.	

Step 7	• Previous step is repeated ensuring lateral temporary bracing is fixed to each truss. Further lateral temporary bracing is added as necessary always overlapping at least two trusses. • Operatives can release truss once both horizontal bracing timbers are fixed	
Step 8	• Permanent longitudinal and diagonal bracing should be added to the inner faces of the trussed rafters at the earliest opportunity in line with the defined bracing schedule given on the drawings.	
Step 9	• Steps 6 – 8 can then be repeated until the whole of the roof is installed.	
NOTE	There are two main types of proprietary high level access systems. • Adapted ladders such as the safe truss access system which uses a specially adapted ladder to be supported within the truss structure providing variable height access as required. Such ladders should be moved between each fixing location. • Temporary support beams such as the DTE safe step system which allow a temporary working platform to be created along the length of the truss structure at an appropriate height. If considered sufficiently in advance of the trussed rafter design stage it is also possible for additional members to be incorporated within the design of	

	each truss as an alternative method to allow a temporary working platform to be created along the length of the truss structure at an appropriate height.	
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Party Wall Spandrel Panel

Once trussed rafters on both sides of the party wall have been installed and permanently braced, they provide a firm structure from which the much heavier dual clad party wall spandrel panels can be safely supported. This means the permanent bracing can be applied immediately from both sides to support the panel during installation. Such party wall spandrel panels should never be installed prior to the fully braced trussed rafter structure as there is no means to provide safe temporary bracing for panels of this weight. Ensure that the spandrel panel manufacturers installation methodology is adopted into your RAMS/safe system of work.

Further reading

<https://www.tra.org.uk/health-safety/>

<https://www.hbf.co.uk/news/hbf-roof-trusses-spandrel-panels-guidance/>

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