

CONSTRUCTION (Design and Management) REGULATIONS 1994

The following section comprises a list of the general hazards associated with typical trussed rafter roof construction. This list is not definitive and should be supplemented with specific project related risks as appropriate.

Trussed Rafter Component: Health & Safety Hazards

| Hazard | Safety Precaution/Warning Flag | | | | | | | | | | |
|---|---|---------------|--|------|---------------------|------|---|------|---|------|---|
| Timber components splinters & sharp edges | When handling use industrial-type gloves, head protection and safety shoes. | | | | | | | | | | |
| Steel plate connectors sharp edge protrusions | When handling trusses use industrial-type gloves, head protection and safety shoes. | | | | | | | | | | |
| Size and weight awkward shape & heavy | <p>Check the Health & Safety plan for truss weights prior to handling. Number of persons required for safe handling to be assessed taking into account the Manual Handling Regulations. Trusses should never be handled by one person only and must be maintained in the vertical position using suitable hand, foot and head protection. Note that the Manual Handling Regulations specify the following person per lift by weight:-</p> <table border="1"> <thead> <tr> <th colspan="2">Up to Persons</th> </tr> </thead> <tbody> <tr> <td>25kg</td> <td>1 (not for trusses)</td> </tr> <tr> <td>33kg</td> <td>2</td> </tr> <tr> <td>50kg</td> <td>3</td> </tr> <tr> <td>75kg</td> <td>4</td> </tr> </tbody> </table> <p>Above 75kg consider mechanical devices for all handling. Wherever possible mechanical lifting is preferred when positioning trusses on wall plates. Give particular consideration to asymmetric trusses.</p> | Up to Persons | | 25kg | 1 (not for trusses) | 33kg | 2 | 50kg | 3 | 75kg | 4 |
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| 50kg | 3 | | | | | | | | | | |
| 75kg | 4 | | | | | | | | | | |
| Off-Loading & site storage-poor ground | Check the Health & Safety plan for truss weights and heights prior to handling. Number of persons required for safe handling to be assessed taking into account the Manual Handling Regulations. Trusses should never be handled by one person only and should be stored on hard ground with the bottom of the stack supported firmly to allow safe hand insertion. Where trusses are banded together with tension strapping, cut through with appropriate consideration for strapping fly-back and pack stability. Stacks above chest height should be avoided unless mechanical handling is available. Temporary shoring should not be susceptible to accidental displacement or easy removal. Give consideration to height and presence of any overhead power cables. | | | | | | | | | | |
| Positioning on wallplate | Consider use of mechanical lifting devices or suitable number of persons for safe handling taking into account Health & Safety plan information etc. Take due account of weather conditions, particularly when wind is gusting, also poor visibility. | | | | | | | | | | |
| Timber preservative compounds/chemicals | Check the Health & Safety plan for the type and presence of timber preservation treatment and/or chemicals. For handling refer to preservation manufacturers' information in the Health & Safety plan. | | | | | | | | | | |
| Large cantilevers possible overturning | Consider extent of cantilever. Provide temporary support before fixing. | | | | | | | | | | |

NOTE: THE PROJECT DESIGN DRAWINGS AND HEALTH AND SAFETY PLAN SHOULD BE CONSULTED FOR ANY PROJECT SPECIFIC INFORMATION.

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Roof Trusses

Ecojoist

Laminated Beams

Room-in-the-roof

Engineered Panels

Infill Timbers

Associated Metalwork

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Trussed Rafters Roof Assembly: Health & Safety Hazards

NB. All information Relating to the Truss Rafter Component is also relevant

Hazard

Safety Precaution/Warning Flag

Binders and bracing work at height

Use suitable safety platform.

Ceiling Binders-width of binder

The section can transmit a man load for the purposes of erection, but is of insufficient width to be defined as a platform or support.

High level binders & bracing-nail fixing harness falling force.

Insufficient strength in the 2no nail connection to resist a restraint

Trusses-minimum timber thickness

Single trusses are normally assembled from 35mm, 44mm and 47mm timbers which are too thin to adequately support a safety harness.

Trusses – natural defects

When seeking hand holds watch in particular for large knot defects, which will weaken-the timber.

Trusses – long web members

Long web members may be a source of weakness when seeking hand holds particularly when leaning away from the web. This weakness will be accentuated by knots or any other timber defects.

Binder/bracing fixings nails missing from trusses

Because of the narrow width of timber, nails may miss the truss member. Care should be taken when seeking hand holds in the regions of nailing. Remove offending nails and apply again on correct position.

Metal hangers projecting past timber

Proprietary metal hangers can expose sharp edges after folding and fixing. All edges should be carefully flattened to the timber edge.

Nailplates projecting past timber

Nail plates have sharp comers and nails, which may inflict deep cuts. Take extra care when working in vicinity of nailplates and always wear suitable head, foot and hand protection.

Metal restraint straps protrusion

Metal restraint straps should never protrude beyond truss face. All straps should be laid and nailed across a timber noggin fixed between the trusses.

Working at height - falls

Provide protection against falls by the provision of working platforms. If this is impossible by suspension equipment and if neither of the above are possible, by fall arrest equipment such as nets. Perimeter scaffolding should be provided at a suitable height to prevent sliding of falling in accordance with the Construction (Health, Safety & Welfare) Regulations.

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