

TRUSSED RAFTER ASSOCIATION



Trussed Rafter – Handling, Storage & Installation Roadmap

Introduction

TRA members offer a variety of services in addition to the design and supply of Trussed Rafters. Where Clients choose to engage TRA members for the installation of the Trussed Rafters then part of this service will be assistance with defining safe and effective systems of work to meet regulatory requirements.

Where Contractors or Clients choose not to employ TRA members in the installation of Trussed Rafters, then they should be aware that the legal responsibility of the manufacturer ceases at point of delivery and responsibility for safe erection of the Trussed Rafters supplied rests with the contractor.

Erection of Trussed Rafters is a specific construction skill which involves work at height and materials which are unstable during initial erection and therefore this activity should always be considered a high risk from a safety standpoint.

This Roadmap is intended to highlight what the TRA believe is the process to achieve the safe Handling, Storage and Installation of a Trussed Rafter Roof. The principle responsibilities of those involved in the construction process are illustrated in the [TRA document PDS 9](#)

Site Design & Planning – Collaboration between the Contractor and Manufacturer

Buying from a TRA Member ensures you are dealing with reputable and highly experienced suppliers who can help you to appreciate the legal obligations and responsibilities that are placed on those in the roof construction process.

Some considerations that contractors should appreciate at the design and planning stage are given below with links for further information:

- [Typical Roof Designs](#), [Trussed Rafter Types](#) and Weight considerations
- [CDM 2007](#) & [Work at Height Regulations 2005](#) – including [Site Risk Assessment/ Method Statements](#)
- Roof Construction Method: Individual Trusses, Prefabricated Truss units, Full Roof assembly on ground
- [Temporary Site Works Design and Planning](#) including temporary bracing, wind factors, point loading.
- Site Staff Training /[Qualification for handling and installation of Trussed Rafters](#)
- Site Handling method: [Crane](#), [Telehandler](#), [Forklift](#), [Manual Team handling](#), Safe Routes/Obstructions
- [Delivery scheduling](#), Vehicle type, size and routes for access, specific site restrictions or requirements
- Just in time deliveries, direct from vehicle to roof erection OR
- Site Storage method: [On ground](#), at height, [temporary racking design & capacity](#), weight limits

TRA members provide information on Trussed Rafter dimensions, weights, configuration and location within the layout and erection sequence. In addition they will provide schedules or drawings to enable the contractor to define their requirements in terms of delivery schedule, maximum bundle weight or size and the requirement for sacrificial slings if scheduled for crane offload. Where appropriate TRA members also provide the necessary fixing details to construct compound or multi-part structures.

Loading at Truss Fabricator – Manufacturer with information from Contractor

TRA provides it's Members with defined Method statements, to ensure the safe loading and transport of Trussed Rafters. These procedures include:

- Differential colours of restraint banding to be used when loading, one colour to secure the bundle and a different colour for securing the bundles to the vehicle.
- The need for appropriate training of the manufacturers Loading Staff and Delivery Drivers.

Unloading at Site – Contractor

Contractors are responsible for [unloading of vehicles at site](#). TRA assists its Members with generic method statements which can help sites develop safe methods of unloading either by [crane](#) or [other forms of mechanical handling equipment](#). These documents are available to customers from your Trussed Rafter supplier upon request. These procedures emphasise:

- All unloading is undertaken from ground level with no need for anyone to access lorry bed.
- Delivery Drivers are aware of their responsibilities and are able to provide information.
- The need for suitably trained, Banksman, Slings, Crane Operators on site.

Transfer and Storage within Site – Responsibility of Contractor unless subcontracted to TRA Members

Multiple handling and site storage increase the risk of damage, so where practicable trussed rafters should be unloaded directly from vehicle to a specifically designed storage rack or loading bay as close as possible to their end location and time for use. Other considerations for the contractor are:

- Site Handling method: [Crane, Telehandler, Forklift](#), HIAB, Manual Team handling. Safe Routes
- Site Storage: [Location On ground](#), at Height, Flat, Upright, Racking design & capacity, weight limits, Weather protection.
- **Stability & Safety within Storage, Trained Banksman, Equipment Operators**

Installation on Site - Contractor unless subcontracted to TRA Members

- **Trained Installers / Kit Erectors fully informed of Site Temporary Works procedures**
- Access Decking, Access above head height, Guarding, Top Hat installation
- Lifting Plan, Procedures and Weight limits, Temporary holding/ storage area
- Trained Banksman, Slings, Crane Operators plus adequate personnel resources
- Truss Spacing and placement, Fixing Metal work e.g. Truss Clips, Shoes, Hangers
- Temporary Bracing Plan, Design, Strength/ Adequacy, Material Quality & Size, fixing; Method/Type/Number
- [Permanent Bracing Plan](#) /Installation, Sheathing/Sarking Boards Membrane /Felt / Batten installation.
- Examples of Good Practice for Trussed Rafter Erection
 - [TRA Erection sequence](#)
 - [Keepmoat Example](#)

Reference Documents

- [HSE document- HSG 33 Health and Safety in Roof Work](#)
- [TRA Technical Handbook – Issue 2 May 2007](#)
- [TRA Members Method Statements – Loading / Unloading](#)
- [BS.5975: 2008 + A1: 2011 - Code of practice for temporary works procedures and the permissible stress design of falsework.](#)
- [Home Builders Federation – Guidance on Manoeuvring of Roof Trusses - July 2012](#)