

Guide to CDM Regulations 2015 – Trussed Rafters

Introduction

The Construction (Design and Management) Regulations (CDM) are one of the major pieces of health and safety legislation that affects everyone working in the construction industry. In the 25 years since they were first introduced the regulations' key approach of managing and designing out risk from inception, through the design, procurement, construction, on-going use, maintenance and demolition has contributed to a significant reduction in the number of accidents on site.

The principle of the regulation is to integrate the management of health and safety into a core project management team, and allocate responsibility proportionate to the influence each member of the team has over the project.

There is a wide range of generic information available in relation to the CDM 2015 Regulations. TRA would particularly recommend to its members:

The HSE Guide to CDM which can be [found here](#)

The CDM section of the [CITB website](#), which includes a short animation giving an introduction to CDM and individual guides for each role defined within CDM such as that of a Designer which can be [found here](#).

The following guide is not intended to replace such generic information but rather summarise the elements which relate specifically to Trussed Rafter Manufacturers.

CDM for Designers of Roof Trusses and Designers of Roofs

It is probably best to consider these two tasks separately, even though the CDM only includes one set of "Designer's" duties.

First some definitions:

A "Designer" – any person (or organisation) who through the furtherance of their business produces designs or instructs another to do so.

A "Design" – any drawing, calculation, specification, schedule of work, bill of quantity, choice of product, choice of method of construction etc. etc.

So just for clarity it is clear that anyone who creates a design for either an individual truss or a whole roof will be considered a Designer under CDM.

Truss design: The designer of the truss is responsible for ensuring that the truss is fit for purpose i.e. suitable to be used in the context of the roof design and will meet the requirements of the roof design.

As far as reasonably practicable the design needs to be safe to use – so for a truss you need to consider things like the ease with which it can be moved i.e. making sure the weight of the individual truss, or pack of trusses, is clearly marked or identified, making sure a pack of trusses is secure enough to be lifted and stored on site, identifying correct lifting positions if there is potential to damage trusses etc. This information should be provided in a form that is available to those who need to see the information i.e. those on site managing and using the trusses and those transporting the trusses.

Responsibility also extends to the practical delivery and handling of the trusses once they get to site so could include the use of sacrificial slings attached to the truss packs before being loaded on to the truck and loading the truss packs on to the truck so that the load can be offloaded safely at site without the delivery driver or others having to access unprotected areas on the truck or the load.

Roof Design: For a whole roof design the duties are the same but the breadth of responsibility is probably greater. The designer of the roof needs to consider:

The safety of those building the roof – can you minimise the risk of injury and ill health to those erecting the roof – this includes; can we minimise work at site through maximum off-site prefabrication, can we build the roof at ground level and lift it up in to place? Where high level bracing is specified in the design consideration should be given to the practicalities of actually accessing this area and fixing the bracing. In other words if your design requires someone to work in an unprotected area at height then it is your responsibility to try and minimise the risk through the design or by giving method for construction that controls the risk – it is not acceptable to just say “it’s the contractors responsibility to find a way to do it safely”.

If the stability of the trusses during construction relies on temporary bracing then this should be specified by the designer including at what locations it is required and what that bracing actually consists of in terms of material specification. If the roof design also includes the felt and battens you need to ensure the design takes account of how these will be fixed. Custom and practice is for the battens to be used as a ladder so you need to ensure the specification for the battens and the spacing of the battens is suitable for this or provide an alternative solution.

Designers also have a responsibility to ensure the thing they have designed can be maintained and used safely by the end user. This is harder to pin down. Consider maybe the requirement for on-going maintenance to soffits and barge boards. Can they be safely accessed? If not then can these exposed parts be manufactured out of materials that need less maintenance?

Whatever design is provided, as the Designer you must ensure you provide sufficient information with the design to allow any user of your design who may be exposed to a risk to manage that risk appropriately. This may mean notes on drawings, printing weights etc. on truss packs, providing information with deliveries etc. If the information is relevant to the end user of the structure i.e. information concerning on-going maintenance, loading (of the trusses in situ i.e. homeowners overloading attic space...) then this information needs to be passed to the Principal Designer for the project for inclusion in the Health and Safety File that will be passed to the homeowner/end user of the structure.

Members as off-site manufacturers fabricating engineered items, roofs or floors have access to a variety of safety information provided by the TRA but need to clearly define their responsibilities and what they consider as the responsibilities of those around them.

Full Roof Design carries more responsibility and it is important that those responsibilities are considered; more often than not a Full Roof Design will be contracted out to an external organisation such as a system owner or independent designer although as a fabricator it is still in our interests to understand the regulations whether the design is in-house or sub-contracted.

Further Information

Given the wide spread use of Trussed Rafters over many years, where the Principle Designer specifies the use of Trussed Rafters they are choosing a design solution that has reasonably foreseeable safety implications for the construction of the roof. The training materials provided by the TRA on behalf of its members, including the TRA Handling Storage and installation roadmap (which can be found on the website), the TRA Technical Handbook and other TRA information sheets (which are free for members to download) are designed to assist where further information may be required for inclusion in the Construction Phase Plan. An example of such a Construction Phase Plan can be [found here](#).

Within CDM 2015 significant emphasis is made in relation to the skills, knowledge and experience of those having responsibilities under the regulations, and there is suggestion for Clients and others to check evidence of these skills. The Trussed Rafter sector is fortunate in having both the TRA On-Line training and System Software Design training as recognised means to demonstrate such skills and knowledge in terms of design. However, TRA Member companies may wish to work with their Designers to determine if additional training specifically related to the requirements of CDM 2015 may be required in order to support staff and enable them to provide evidence should it be requested.