

Safe erection of roof trusses

Advice and checklist for employers (builders and erectors) who erect roof trusses.

June 2017

Background

The erection of roof trusses in the domestic housing sector is an inherently high risk activity due to the nature of fall hazards associated with truss erection. The Victorian WorkCover Authority (VWA) and representatives of the housing sector including the Victorian Volume Home Builders Safety Alliance (VVHBSA), the Housing Industry Association (HIA) and the Master Builders Association of Victoria (MBAV) continue to work together to consider the most practical means by which the risks associated with truss erection can be minimised, so far as is reasonably practicable.

The checklist below, developed in conjunction with the above bodies, should be used to make sure all safety elements related to the erection of roof trusses have been considered.

Employer duties relating to high risk construction work

The erection of roof trusses generally involves employees undertaking work where there is a risk of falling from a height which is greater than two metres. It may also include the placement of trusses onto housing frames involving the use of powered mobile plant, such as a vehicle loading crane. In these situations roof truss erection meets the definition of 'high risk construction work' within Part 5.1 of the Occupational Health and Safety Regulations 2017 (OHS Regulations).

When employees are undertaking high risk construction work, employers also have a duty to develop a safe work method statement (SWMS) and ensure that it is implemented in addition to their general duty to provide a safe workplace. A SWMS should be prepared in consultation with the employees who are to undertake the high risk construction work. Employers must ensure the SWMS is reviewed whenever the high risk construction work changes or there is any indication that the risk controls measures are not adequately controlling risks. Employers must also retain a copy of the SWMS for the duration of the high risk construction work.

In developing the SWMS employers must additionally have regard to the 'hierarchy of controls' within Part 3.3 of the OHS Regulations, when considering the types of measures that need to be implemented to control any fall risks. The hierarchy of controls is a system that ranks controls from highest level of protection to the lowest.

Guidance on truss erection

The following checklist provides further guidance to assist builders and/or erectors manage the risks associated with the erection of trusses.

Roof truss erection checklist

Truss design

- Have alternative designs for large spans and/or high trusses to facilitate safer installation been considered?

Preparing the site for truss delivery

- Have the requirements in relation to the delivery of the roof trusses, including access by delivery vehicles, been considered?

You should consider:

- conditions for safe access to the site
- the deployment of any outriggers
- any known restrictions on crane boom movements such as existing structure.

- Have you consulted with the supplier and the delivery contractor to ensure, so far as possible, that the roof trusses are delivered and unloaded in an order that minimises handling on site and assists the sequential erection of the trusses?

More information about Safe erection of roof trusses

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- Has the delivery contractor been informed where the roof trusses are to be stacked? Where trusses are to be directly loaded onto the building structure a competent person should have:
- reviewed the structural capacity of the structure, as it will exist at time of delivery
 - provided direction as to the designated landing areas, any temporary supports needed and maximum loadings allowed.

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- Have the appropriate fall protection controls been considered and implemented where truss delivery involves persons working at height? This may require the use of appropriate ladders to unslung the load.

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- Have arrangements been made for traffic management?

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- Have arrangements been made for clear access to the site to enable:
- installation of work platforms or other fall protection requirements
 - safe use of ladders and other equipment
 - safe handling of trusses, associated bracing and other material and equipment?

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- Has the site and its surrounds been made easily accessible and clear of mud so far as reasonably practicable?

Use of a crane

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- Have traffic management arrangements been discussed with the delivery contractor to ensure that appropriate traffic management arrangements are in place?
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- Has a designated standing area for the crane delivery vehicle been arranged that meets any loading conditions specified by the delivery contractor?
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- Have arrangements been made with the crane delivery contractor for the delivery crew to be provided with any information needed to ensure the correct placement of loads within the site and any loading limitations with regard to the placement of loads directly onto the structure?

Development of site specific erection methods

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- Has a SWMS for the specific roof truss erection process been developed? The SWMS should take into account site specific factors including:
- available site access and storage
 - truss size and design
 - type of fall protection to be used for persons working near the external perimeter of the building
 - type and suitability of any internal platforms to be used
 - fall protection to any stair voids etc
 - type and suitability of any ladders to be used
 - the manner in which trusses are to be manoeuvred both at ground level and at top plate level
 - weather conditions (eg heat, wind and rain)
 - additional equipment needed to install trusses
 - manner in which truss bracing and spacers are to be installed to minimise fall risks
 - safe use of power tools including electrical safety.

Note: Many employers involved in truss erection will have a basic or generic truss erection SWMS that forms the basis of their work procedure for most sites. However it is likely that some of the assumptions, including likely site conditions and truss designs will vary. Accordingly employers must ensure that generic SWMS are reviewed and amended as necessary for each specific site.

More information about Safe erection of roof trusses

Formation and preparation of erection crew (training, supervision etc)

- Is the size, experience and competence of the erection crew sufficient?

- Is there an appropriate number of people experienced and competent in the erection of roof trusses to provide adequate guidance and supervision of less experienced members?

- Have the erection crew been appropriately trained in relation to the specific site and does the erection crew sufficiently understand the specific SWMS?

- Have the erection crew been appropriately trained and instructed on roof truss inspection to enable them to identify any obvious defects prior to relying on any other component of the truss for support?

- Has the ability of the erection crew to be available to lift and manoeuvre trusses in to place been considered?

An assessment of the following factors should be undertaken to determine how roof trusses are to be handled and the number of persons needed at each stage of the process:

 - overall size of trusses, span, height, weight
 - restrictions on handling imposed by site, house design, other factors
 - crange available.

- Has the erection crew been provided with clothing and footwear suitable for the task (ie by ensuring clothing and footwear is in good condition)?

- Has appropriate supervision been arranged to ensure adherence to the SWMS?

Further information

For further information go to worksafe.vic.gov.au.

- Code of practice: *Prevention of falls in Housing Construction*
- More information about: *Fall protection for roof work*
- Supply chain safety guide: *Prevention of falls in the transport of roof trusses and wall frames*
- Guidance note: *Prevention of falls in construction - Selection and safe use of portable ladders*

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This guidance has been reviewed and updated for the sole purpose of amending year and regulation references relating to the Occupational Health and Safety Regulations, in line with amendments which came into effect on 18 June 2017.