Title	**Manufacture pre-nailed timber roof trusses in a controlled environment**		
Level	**3**	**Credits**	**20**

Purpose	This unit standard is intended for people working in timber structure manufacturing. People credited with this standard are able to manufacture pre-nailed timber roof trusses in a controlled environment to commercial standards.

Classification	Construction Trades > Carpentry

Available grade	Achieved

Guidance Information

1 Assessment
This unit standard is intended to align with the *New Zealand Certificate in Timber Structure Manufacture – Specifications* and the New Zealand Certificate in Timber Structure Manufacture (Level 3) with strands in Wall Frame Manufacture, and Roof Truss Manufacture [Ref: 4319].

Evidence for this standard must reflect commercial standards.

Commercial standards refer to verbal and written information covering company policy, standard operating procedures and processes and job-specific instructions.

Working to commercial standards must be confirmed by a person with current expertise in the timber structure manufacturing trade.

2 Definitions
Computer controlled machinery refers to automated machinery controlled by a computer for wall frame and roof truss production.
Controlled environment is a manufacturing workplace within which trade skills are applied.
Manually operated machinery refers to non-computerised machinery and includes hand-held power operated saws and hand-held non-powered saws.
Timber structures are cut and assembled in a controlled environment. They may include wall frames and/or roof trusses.*Workplace procedures* refer to the documented procedures specific to a workplace, which set out the standards and required practices of that workplace.

3 Legislation, standards and guidance information relevant to this standard includes the following; and any subsequent amendments and replacements:

New Zealand Certificate in Timber Structure Manufacture – Specifications, BCITO, October 2020, available from www.waihanga.nz.

Legislation accessed at www.legislation.govt.nz
- Building Act 2004
- Health and Safety at Work Act 2015
- The New Zealand Building Code.

Standards accessed at www.standards.govt.nz
- NZS 3602:2003 *Timber and wood-based products for use in building*
- NZS 3604:2011 *Timber-framed Buildings.*

Best practice and good practice guidelines
- *The Absolutely Essential Health and Safety Toolkit for Small Construction Sites,* and other Worksafe NZ publications available from www.worksafe.govt.nz.

Skill specification and performance level guidance

Skill specification

Manufacture pre-nailed timber roof trusses in a controlled environment.

Knowledge

The placement and purpose of timber roof truss members.

Range top cord, bottom cord, web.

The requirements for cutting timber roof truss members.

Range cutting list, selecting timber lengths, cut types, saw operation, clearing cut members, workplace health and safety requirements;
cutting includes use of computer controlled saws or manual saws.

The purpose and requirements for different types and sizes of the proprietary hardware used for timber roof truss manufacture.

The purpose and requirements for the use of additional and associated products for timber roof truss manufacture.

Range may include – loose timber members, floor and rafter truss with steel webs.

The types and purposes of different timber roof trusses.

Range standard truss, truncated truss, gable end truss, girder truss, jack truss monopitch truss.

The set out requirements of timber roof trusses in a manufacturing environment.

Range correct truss type, web design, camber, plate placement, bow, overhang measurement, mitre orientation.

The assembly and workplace health and safety requirements of timber roof trusses in a manufacturing environment.

Range confirm positioning and tack members, place and fix hardware, press hardware, clear completed trusses from the assembly line.

Skills

Cut timber roof truss members.

Range computer controlled saws or manual saws.

Select and check the quality of roof truss members and hardware for use in roof truss assembly.

Set out roof timber roof truss members ready for assembly.

Range correct truss type, web design, camber, plate placement, bow, overhang measurement, and mitre orientation as documented.

Assemble timber roof trusses in a controlled environment to meet job documentation.

Range confirm positioning and tack members, place and fix hardware, press hardware, clear completed trusses from the assembly line.

Manufacture additional and associated products for timber roof trusses.

Range may include – loose timber members, floor and rafter truss with steel webs.

Performance level guidance

Performance must reflect construction in a controlled environment to the required production rates, job documentation, workplace health and safety requirements and workplace procedures.

Performance must reflect the use of either computer controlled machinery or manually operated machinery.

Performance must reflect the use of one supplier of proprietary hardware; Mitek and Pryda. There may be other providers of proprietary hardware for roof trusses; the skills are transferable.

Planned review date	31 December 2026

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	25 November 2021	N/A

Consent and Moderation Requirements (CMR) reference	0048

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Comments on this unit standard

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council qualifications@waihanga.nz if you wish to suggest changes to the content of this unit standard.