

Unit of Competency CPCCCA3007

Construct pitched roofs

Application

This unit of competency specifies the skills and knowledge required to set out, construct and erect pitched roofs to accommodate roof coverings for weatherproofing purposes, meeting all relevant requirements of the National Construction Code (NCC), Australian Standards, work health and safety (WHS), and Commonwealth and state or territory legislation.

The unit includes determining the required materials and process, and constructing scotch valley gable, broken hip and valley roof structures.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of CPCCWHS1001 *Prepare to work safely in the construction industry* meets this requirement.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Prerequisite Unit

CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry.

Elements and Performance Criteria

1. Plan and prepare.	<table><tr><td data-bbox="432 1104 480 1137">1.1</td><td data-bbox="528 1104 1335 1137">Read and interpret work instructions and plan sequence of work.</td></tr><tr><td data-bbox="432 1160 480 1193">1.2</td><td data-bbox="528 1160 1335 1350">Plan all work to comply with laws and regulations, the National Construction Code (NCC), Australian Standards, work health and safety (WHS) and environmental requirements, manufacturers' specifications, workplace requirements, drawings and specifications.</td></tr><tr><td data-bbox="432 1373 480 1406">1.3</td><td data-bbox="528 1373 1335 1440">Select tools and equipment, check for serviceability and report any faults.</td></tr><tr><td data-bbox="432 1462 480 1496">1.4</td><td data-bbox="528 1462 1335 1529">Select and use personal protective equipment (PPE) for each part of the task.</td></tr><tr><td data-bbox="432 1552 480 1585">1.5</td><td data-bbox="528 1552 1335 1619">Inspect work site, locate services, assess hazards and apply risk controls, including required signage and barricades.</td></tr><tr><td data-bbox="432 1641 480 1675">1.6</td><td data-bbox="528 1641 1335 1709">Select materials required for task, calculate quantities, handle safely and prepare and position ready for use.</td></tr></table>	1.1	Read and interpret work instructions and plan sequence of work.	1.2	Plan all work to comply with laws and regulations, the National Construction Code (NCC), Australian Standards, work health and safety (WHS) and environmental requirements, manufacturers' specifications, workplace requirements, drawings and specifications.	1.3	Select tools and equipment, check for serviceability and report any faults.	1.4	Select and use personal protective equipment (PPE) for each part of the task.	1.5	Inspect work site, locate services, assess hazards and apply risk controls, including required signage and barricades.	1.6	Select materials required for task, calculate quantities, handle safely and prepare and position ready for use.
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2. Set out, prepare and erect pitched roof members.	<table><tr><td data-bbox="432 1738 480 1771">2.1</td><td data-bbox="528 1738 1335 1805">Set out and mark position of members on top plates for roof type and rafter spacing.</td></tr><tr><td data-bbox="432 1827 480 1861">2.2</td><td data-bbox="528 1827 1335 1861">Determine bevels for all roof members.</td></tr><tr><td data-bbox="432 1883 480 1917">2.3</td><td data-bbox="528 1883 1335 1951">Calculate and set out pattern rafter to length allowing for overhang and creeper reductions.</td></tr><tr><td data-bbox="432 1973 480 2007">2.4</td><td data-bbox="528 1973 1335 2007">Set out and cut main ridge boards to length.</td></tr><tr><td data-bbox="432 2029 480 2063">2.5</td><td data-bbox="528 2029 1335 2063">Cut common rafters to length, and check.</td></tr></table>	2.1	Set out and mark position of members on top plates for roof type and rafter spacing.	2.2	Determine bevels for all roof members.	2.3	Calculate and set out pattern rafter to length allowing for overhang and creeper reductions.	2.4	Set out and cut main ridge boards to length.	2.5	Cut common rafters to length, and check.		
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	2.6 Erect common rafters in correct sequence. 2.7 Calculate lengths for hip and valley rafters from pitch of roof. 2.8 Cut and fix hip and valley rafters. 2.9 Cut and fix creeper rafters from pattern rafter allowing for overhang.
3. Install roof support.	3.1 Determine lengths for under-purlins. 3.2 Cut and install under-purlins. 3.3 Measure, cut and install struts to under-purlins, hips, valley and ridges. 3.4 Install collar ties and tie-downs to span tables in AS 1684 <i>Residential timber-framed construction</i> . 3.5 Fit trimmers to gable ends to take gable end rafter and barge board. 3.6 Cut and fix valley boards and surrounding battens.
4. Clean up.	4.1 Clean up, meeting all legislative and workplace requirements for safety, waste disposal and materials handling. 4.2 Check, maintain and store tools and equipment and report any faults.

Foundation skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCCCA3007C Construct pitched roofs.

Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCCA3007 Construct pitched roofs

Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by:

- setting-out, constructing and erecting:
 - a skillion roof above 10 degrees for a structure of a minimum 10 square metres
 - a roof, or a series of roofs, together covering a minimum of 30 square metres, including:
 - a broken hip and valley
 - a gable end
 - a scotch valley
- setting-out:
 - a pattern rafter with birdsmouth, creeper reductions and eave over-hang
 - roof bevels
 - strutting beams and under purlins as required by span tables in *AS 1684 Residential timber-framed construction* and manufacturers' specifications.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- compliance requirements of the National Construction Code and Australian Standards relevant to constructing pitched roofs, including AS 1684 Residential timber-framed construction
- workplace quality policies and standards relevant to constructing pitched roofs
- safety requirements relevant to constructing pitched roofs
- roofing frame construction techniques
- contents of, and terms and symbols used in plans, specifications and drawings for constructing pitched roofs
- types and uses of tools and equipment used for constructing pitched roofs
- processes, relevant to constructing pitched roofs, for:
 - setting out and measuring materials for frames
 - calculating material requirements
- materials relevant to constructing pitched roofs
- roofing set-out procedures
- types, structural properties and uses of timber, engineered timber products and steel for constructing pitched roofs
- characteristics and construction techniques of pitched roof types:
 - scotch valley
 - broken hip and valley
 - hip and valley
 - gable and verge
 - skillion
 - strut/props
- geometric development of bevels.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

This unit must be assessed in the workplace or a close simulation using realistic workplace conditions and standards, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

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