



New Zealand Certificate in
Timber and composite flooring

Level 4



Specifications

September 2020



BCITO
buildingpeople

Foreword

Welcome to the *specifications* that set out the technical content of the New Zealand Certificate in Timber and Composite Flooring with strands in Bonded Installation, and Fine Sand and Finishes (Level 4) [Ref: XXXX]

These *specifications* are, collectively, a prescription for achieving the requirements of the qualification. Together they describe what a person must know and be capable of to become a qualified trade professional.

They are intended to support tertiary education organisations to develop programmes that detail how learning and assessment will occur.

Programmes must encompass these *specifications* and support the development of the skills, knowledge and attributes that reflect the technical competence, self-management, professionalism and leadership.

Assessment related to these Specifications

The individual skill sets included in these specifications are designed to be read, interpreted and assessed together. This means that information contained in one skill set that is relevant to any other skill sets is stated only once, in the most appropriate place. However, the expectation is that assessment will look for links across skill sets. This avoids duplicating information and allows the candidate to be assessed holistically. Where the skills and knowledge included in one skill set are essential to achieving other skill sets, the candidate must be capable of applying them to the level, scope and complexity required.

The New Zealand Certificate in Timber and Composite Flooring with strands in Bonded Installation, and Fine Sand and Finishes (Level 4) is achieved through completing the qualification core and at least one other strand. Candidates can further enhance their qualification through the addition of any combination of the remaining strands.

To achieve the New Zealand Certificate in Timber and Composite Flooring with strands in Bonded Installation, and Fine Sand and Finishes (Level 4) a candidate must be capable of maintaining the professional standards of the trade and consistently performing the requirements of each skill set, and the specifications as a whole, to a commercially competent standard. Professional standards are reflected in:

- employment agreements, codes of conduct and standard operating procedures
- training and education agreements
- standards of ethics and professionalism produced by industry membership organisations
- best practice and technical guidance produced by suppliers, regulators, education and industry organisations

Commercial competence requires a candidate to be capable of consistently demonstrating the technical skills and knowledge of the trade:

- to current regulatory, industry and commercial standards
- within a commercially viable timeframe

Core Compulsory

Specification: Fundamentals		25 credits
Skill sets:	Covering:	
Legislation	Relevant legislation and standards as it applies to timber and composite flooring	
Tools, Plant and Equipment	Tools plant and equipment used in the timber and composite flooring industry	
Planning and Communication	Planning and communication in the timber and composite flooring industry	
Measurement and Calculations	Measurement and calculations as they apply to the timber and composite flooring installation industry	
Drawings, Specifications and Job Documentation	Drawings specifications and job documentation relevant to timber and composite flooring installation	

Specification: Professional Standards		15 credits
Skill Set:	Covering:	
Commercial Competence and Professional Standards	Performance standard required of a trade professional	

Specification: Products and Materials		10 credits
Skill Set:	Covering:	
Products and Materials	Understand timber and composite flooring products including storage and handling	

Strands

Specification: Bonded Installation		90 credits
Skill Set:	Covering:	
Substrate Preparation	Prepare new and existing substrates for timber and composite flooring	
Installation	Install timber and composite flooring using the bonded method	
Post Installation	Perform post installation tasks including any repairs to the timber or composite floor	

Specification: Fine Sand and Finishes		90 credits
Skill Set:	Covering:	
Fine Sand	Assess timber and composite floors and fine sand as required	
Finishes	Apply finishes to timber and composite flooring	

To achieve this fundamentals specification, a candidate must understand the underpinning principles, and be able to apply them in practice to all areas of timber and composite flooring operations.

This specification contains the following 5 skill sets:

- Legislation
- Tools, Plant and Equipment
- Planning and Communication
- Measurement and Calculations
- Drawings, Specifications and Job Documentation

Each skill set comprises:

- **Know** - the theory that underpins the practical skills
 - **Do** - the practical skills you need to have
 - **Comments** - explanatory notes to clarify specific aspects of knowledge and skill
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Skill Set 1:	Legislation	5 credits
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Know:	The health and safety legislative framework as it applies to timber and composite flooring operations
	The environmental legislative framework as it applies to timber and composite flooring operations
	The building legislative framework as it applies to timber and composite flooring operations
	The client protection legislative framework as it applies to timber and composite flooring operations
Do:	Apply the health and safety legislative framework in everyday contexts within timber and composite flooring operations
	Apply the environmental legislative framework in everyday contexts within timber and composite flooring operations
	Apply the legislative building framework in everyday contexts within timber and composite flooring operations
	Apply the client protection legislative framework in everyday contexts within timber and composite flooring operations
Comments:	The legislative framework refers to the hierarchy of Acts of Parliament, Regulations, Rules, Codes, Standards, approved codes of practice and best/good practice guidelines
	Knowledge of the health and safety legislative framework includes safety requirements when working with hazardous materials
	The level of legislative knowledge required is that of a timber and composite flooring tradesperson rather than that of an expert with specialist knowledge

Skill Set 2:	Tools, Plant and Equipment	5 credits
Know:	The use and application of different hand tools used by the timber and composite flooring trade	
	The use and application of different power tools used by the timber and composite flooring trade	
	The use and application of different plant and equipment used by the timber and composite flooring trade	
	The use and application of different accessories and consumables used by the timber and composite flooring trade	
Do:	Use a range of hand tools used by a the timber and composite flooring trade	
	Use a range of power tools used by the timber and composite flooring trade	
	Use a range of plant and equipment used by the timber and composite flooring trade	
	Use a range of accessories and consumables used by the timber and composite flooring trade	
	Maintain tools, plant and equipment used by the timber and composite flooring trade	
Comments	Timber and composite flooring trades include installers, and floor sanders and finishers	
	The skill and knowledge associated with using a particular tool or piece of plant or equipment could be applied to another less familiar tool or piece of equipment	
	Hand tools are those which are typically used on an everyday basis	
	Power tools are those which are typically used on a regular basis	
	Plant and equipment is that which is typically used on an regular basis	
	Consumables are things associated with a tool or piece of equipment that are consumed or degraded through use	

Skill Set 3:	Planning and Communication	4 credits
Know:	The roles and responsibilities of the parties to timber and composite flooring operations	
	How to plan and coordinate work to fit with a programme and other parties	
Do:	Establish work activities, priorities and deadlines	
	Plan and coordinate timber and composite flooring operations	
	Work effectively with the parties to timber and composite flooring operations	
	Communicate effectively with own team and parties to timber and composite flooring operations	
Comments:	Parties to flooring operations include the client, main contractor, subcontractors, manufacturers, suppliers, designers, and compliance bodies	
	Working effectively involves everyday contact on site and the ability to discuss, question and reach conclusions about work requirements and integration of activities	
	Communicating effectively involves written, oral, and electronic formats	

Skill Set 4:	Measurement and Calculations	6 credits
Know:	<p>The different units of measurement and how they are used in timber and composite flooring operations</p> <p>Formulas for calculating area, volume and perimeter</p> <p>How to calculate the linear metres of flooring product required to cover specific areas</p> <p>How to use and apply percentages and ratios to calculations</p> <p>How to calculate labour, material and overhead and other costs</p>	
Do:	<p>Undertake measurements and calculations in one, two and three dimensions as required to complete timber and composite flooring operations</p> <p>Calculate material quantities and make the appropriate allowances</p> <p>Calculate labour, materials overheads and other costs to price jobs</p>	
Comments:	<p>Units of measurement include length, area, volume, time and distance</p> <p>Overheads are the direct costs associated with a specific job that are not materials or labour</p> <p>Timber and composite flooring operations may include substrate preparation, bonded installation, or fine sand and finishes</p> <p>The level of pricing knowledge required is that of an employee rather than that of a business owner</p>	

Skill Set 5:	Drawings, Specifications and Job Documentation	5 credits
Know:	<p>The different types of drawings, specifications and job documentation used for timber and composite flooring operations</p> <p>The function and use of drawings, specifications and job documentation used for timber and composite flooring operations</p> <p>The key components that make up a set of drawings, specifications and job documentation for timber and composite flooring operations</p> <p>How to read and interpret drawings, specifications and job documentation for timber and composite flooring operations</p>	
Do:	<p>Read and interpret specifications and job documentation and apply drawings so timber and composite flooring operations can be completed</p> <p>Produce sketch and scale drawings for timber and composite flooring operations</p> <p>Complete job documentation for timber and composite flooring operations</p>	
Comments:	<p>Interpreting drawings and specifications includes understanding conventions including terminology, drawing types, scales, symbols, dimensions and abbreviations.</p> <p>The minimum level to which drawings, specifications and job documentation need to be understood and interpreted is to allow timber and composite flooring operations to be undertaken as documented</p> <p>A scope of work is a type of specification</p> <p>Job documentation includes checklists, records and schedules produced to quantify and qualify timber and composite flooring operations</p> <p>The level of knowledge required for drawings and specifications is that of a timber and fine sand and finishes¹⁷ tradesperson rather than that of a designer or architect.</p>	

This specification reflects the performance standard required of a commercially competent timber and composite flooring installer. It contains the following skill set:

- Commercial competence and professional standards

Candidates must be capable of demonstrating the knowledge and skills included in this skill set to be awarded the New Zealand Certificate in Timber and Composite Flooring with strands in Bonded Installation, and Fine Sand and Finishes (Level 4) [Ref: xxx].

Each skill set comprises:

- **Know** - the theory that underpins the practical skills
 - **Do** - the practical skills you need to have
 - **Comments** - explanatory notes to clarify specific aspects of knowledge and skill
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Skill set 1:	Professional Standards	15 credits
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Know:	The knowledge and practical skills involved in being a timber and composite flooring tradesperson
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	The ways in which professional standards contribute to the sustainability of the timber and composite flooring trade
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	How to locate and interpret industry professional standards
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Do:	Perform all aspects of the relevant strand(s) in the timber and composite flooring trade to a commercially competent standard
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	Behave professionally on a day-to-day basis
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	Fulfil responsibilities in the workplace to meet commercial contracts, employment and education agreements
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	Self-manage ongoing learning and development
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	Keep up to date with the industry's professional standards
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	Support the learning and development of others in training
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	Lead and coordinate the everyday on-site operations of the timber and composite flooring installation projects
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Comments:	A commercially competent standard means completing work to a commercial standard in a commercial environment without direct supervision
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	Demonstrating professional behaviour on a day-to-day basis is likely to include working constructively with clients, suppliers and people involved in the candidate's learning programme, being consistently reliable, responsible and accountable, acting with integrity, making and keeping commitments, and showing respect and consideration for people, property and the environment
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	Industry sustainability refers to the economic, environmental and social practices that contribute to the sustainability and improvement of the building and construction industry
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To achieve this timber and composite flooring specification, you must understand the materials and products used for timber and composite flooring work.

This specification contains the following skill set:

- Products and Materials

Each skill set comprises:

- **Know** - the theory that underpins the practical skills
 - **Do** - the practical skills you need to have
 - **Comments** - explanatory notes to clarify specific aspects of knowledge and skill
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Skill Set 1:	Products and Materials	10 credits
Know:	<p>The types, features and properties of timber as a natural resource</p> <p>The types, functions and properties of timber and composite flooring products</p> <p>The types, functions, limitations and properties of products and materials used in timber and composite flooring operations</p> <p>The safe handling, storage, use and disposal of products used when installing timber and composite floors</p>	
Do:	<p>Handle and store timber and composite flooring products and materials</p> <p>Safely dispose of surplus and unwanted surplus flooring, products and materials</p>	
Comments:	<p>Timber as a natural resource includes those species used in the manufacture of flooring products including hardwoods, softwoods, and indigenous, exotic and imported timbers</p> <p>Timber and composite flooring products include solid, laminated and processed timber products in strip, block, sheet or tiled form</p> <p>Products and materials include moisture barrier protection systems, tapes, adhesives, sand papers, solvents, oils, cleaners, fixings and items required to finish edges, junctions and change in planes</p> <p>Moisture barrier protection systems refers to products and materials used to prevent the transfer of moisture from the substrate to the floor covering</p> <p>Safe disposal includes the consideration of people and environment</p>	

To achieve this bonded installation specification, you must understand and undertake all aspects of substrate preparation, bonded installation work and following installation requirements.

This specification contains the following 3 skill sets:

- Substrate Preparation
- Installation
- Following Installation

Each skill set comprises:

- **Know** - the theory that underpins the practical skills
 - **Do** - the practical skills you need to have
 - **Comments** - explanatory notes to clarify specific aspects of knowledge and skill
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Skill Set 1:**Substrate Preparation****20 credits****Know:**

The properties of surfaces onto which timber and composite overlay flooring products are installed

Physical and technical requirements of surfaces onto which timber and composite flooring operations are carried out

Common issues associated with surfaces and how to remedy them for timber and composite flooring operations

Preparation requirements and methods associated with different substrate types

How to recognise potentially contaminated, unsuitable or hazardous surfaces

Do:

Assess new and existing substrates in preparation for timber and composite flooring operations

Remove existing floor coverings, coatings and contaminants from surfaces

Prepare and remediate existing substrate surfaces before carrying out timber and composite flooring operations or organise for specialists to carry-out repairs

Reassess substrate surfaces after any repairs have been carried-out

Comments:

Substrate is the base material of the floor and includes timber strip, processed timber sheets, composite sheets, concrete and metal

The substrate surface is the face of the substrate

Physical and technical requirements include levels, falls, thickness, structural support, moisture content, fixings, stability and cleanliness

Assessment of surfaces takes into account physical and technical requirements and the recognition of potentially contaminated, unsuitable or hazardous surfaces

Surfaces may need to be prepared to meet the physical and technical requirements of the timber or composite overlay flooring

Remediating existing surfaces includes the apprentice carrying out minor maintenance and fixes ready for timber flooring installation or organising for major repairs by a specialist

Skill Set 2: Bonded timber and composite flooring installation 55 credits

Know:	How to recognise manufacturing flaws and transportation damage to timber and composite flooring products prior to installation
	How to install acoustic underlay for bonded timber and composite flooring operations
	The bonded installation method for timber and composite flooring on different floor surfaces
	How to finish bonded timber and composite flooring around edges, junctions and joints
	How to install bonded timber and composite flooring on stairs
Do:	Apply the bonded method to install timber and composite flooring on different surfaces and areas
	Install products and materials used in conjunction with bonded timber and composite flooring
	Apply the bonded installation method to timber and composite flooring on stairs
Comments:	Bonded installation is also known as direct fixed flooring, glue down or direct adhesion method
	Bonded flooring installation includes products and materials used when cutting, fitting, gluing, fixing and jointing
	Installation of products and materials includes the application of underlayments where necessary

Skill Set 3: Post Installation 15 credits

Know:	How to repair damaged bonded timber and composite flooring
	How to temporarily protect newly installed bonded timber and composite flooring
	Where to source information regarding ongoing care and maintenance of bonded timber and composite flooring
Do:	Remove surplus materials and clean up
	Temporarily protect newly installed bonded timber and composite products
	Perform repairs on damaged bonded timber and composite flooring areas
	Provide clients with information regarding ongoing care and maintenance
Comments:	Information regarding ongoing care and maintenance includes specific manufacturers' recommendations and relevant standards
	Procedures for giving information to clients regarding care and maintenance are specific to each workplace

To achieve this fine sands and finishes specification, you must understand and complete fine sands and finishes on timber flooring.

This specification contains the following 2 skill sets:

- Fine sands
- Finishing timber flooring

Each skill set comprises:

- **Know** - the theory that underpins the practical skills
 - **Do** - the practical skills you need to have
 - **Comments** - explanatory notes to clarify specific aspects of knowledge and skill
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Skill Set 1:	Fine sands	50 credits
Know:	<p>Common issues associated with timber and composite floors and how to remedy them for sanding and finishing</p> <p>Specific surface preparation requirements and methods associated with different timber and composite flooring requiring sanding and finishing</p> <p>Types, functions and properties of sandpapers used in timber and composite floor sanding</p> <p>The types, functions and properties of fillers used in timber and composite floor sanding</p>	
Do:	<p>Assess new and existing timber and composite floors before sanding and finishing</p> <p>Remove existing floor coverings, coatings and contaminants from timber and composite flooring surfaces</p> <p>Prepare and remediate existing timber and composite floors before sanding and finishing or organise for specialists to carry out repairs</p> <p>Reassess timber or composite floors</p> <p>Apply fillers as required and fine sand timber and composite floors in preparation for the process of finishing</p>	
Comments:	<p>Specific surface preparation requirements for different timber and composite flooring includes measuring moisture content, thickness, density, and stability</p> <p>Fine sand preparation is carried out on timber and composite floors</p>	

Skill Set 2:	Finishing timber flooring	40 credits
Know:	<p>The types, functions and properties of finishing products used for timber and composite flooring</p> <p>How to apply finishes to prepared timber and composite floor surfaces</p> <p>Where to source information regarding ongoing care and maintenance of timber and composite flooring</p>	
Do:	<p>Perform safe handling, use, storage and disposal of finishing products and materials</p> <p>Apply finishes to prepared timber and composite floor surfaces</p> <p>Provide advice regarding on-going care and maintenance of finished timber and composite floors as required by workplace procedures</p>	
Comments:	<p>Finishing products include polyurethanes, stains and oils</p> <p>Prepared surfaces include those that are yet to be finished and those that have already had coats applied to them</p> <p>Preparing timber includes checking surfaces for cleanliness and being free from contaminants</p> <p>Advice is in both written and oral form</p> <p>Procedures for giving information to clients regarding care and maintenance are specific to each workplace</p> <p>Handling, storage and disposal of finishing products requires practical and environmental consideration</p>	

References

The following is a list of nationally applicable legislation, standards and best practice guidance information relevant to the learning and assessment included in this *Specification* at the time of this publication.

This is not intended to be an exhaustive list. Programme developers are expected and encouraged to develop programmes that also reflect the requirements of their region, learners and industry stakeholders.

It is the responsibility of TEOs offering programmes leading to the qualification to ensure learning and assessment reflect current local and national legislative, regulatory and industry standards.

Acts of Parliament available from www.legislation.govt.nz

Building Act 2004

Construction Contracts Act 2002

Health and Safety at Work Act 2015

Fair Trading Act 1986

Fire and Emergency New Zealand Act 2017

Hazardous Substances and New Organisms Act 1996

Heritage New Zealand Pouhere Taonga Act 2014

Resource Management Act 1991

Regulations available from www.legislation.govt.nz

Building (Definition of Restricted Building Work) Order 2011

Building (Residential Consumer Rights and Remedies) Regulations 2014

Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005

Health and Safety at Work (Asbestos) Regulations 2016

Health and Safety at Work (General Risk and Workplace Management) Regulations 2016

Health and Safety at Work (Worker Engagement, Participation and Representation) Regulations 2016

Health and Safety at Work (Hazardous Substances) Regulations 2017

Codes available from www.building.govt.nz

The New Zealand Building Code

Standards available from www.standards.co.nz

ISO 10874:2009 Resilient, textile and laminate floor coverings - Classification

Guidelines and Approved Codes of Practice available from www.worksafe.govt.nz for the following topics:

Code of practice for manual handling

Powder-actuated hand-held fastening tools – Approved Code of Practice

Management and removal of asbestos – Approved Code of Practice

General risk and workplace management – Interpretive guidelines

The absolutely essential health and safety toolkit for small construction sites

Best practice and good practice guidelines

Various BRANZ publications available at www.branz.co.nz

The Absolutely Essential Health and Safety Toolkit for Small Construction Sites and other Worksafe NZ publications available from www.worksafe.govt.nz

Various *Floor NZ* publications available from <https://floornz.org.nz>