WAIHANGA ARA RAU
Construction and Infrastructure
Workforce Development Council

BCATS

PROGRAMME GUIDANCE FOR BUILDING, CONSTRUCTION, AND ALLIED TRADES SKILLS (BCATS)

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1.0	13 June 2025	New document created.
1.1	9 December 2025	Updated map of skill standards for GPOs for 3844-2.

CONTENTS

1. INTRODUCTION

This *Programme Guidance* contains information about, and best practice for, Building, Construction, and Allied Trades Skills (BCATS) skill standards.

It is useful for people involved in BCATS training and includes skill standards assessment support, equity considerations, and te Tiriti o Waitangi requirements which may not be included in other NZQA products.

It explains the role of the BCATS skill standards as building blocks leading to the following qualifications:

- New Zealand Certificate in Building, Construction, and Allied Trades Skills (Level 1) [Ref: 3843]
- New Zealand Certificate in Building, Construction, and Allied Trades Skills (Level 2) [Ref: 3844]
- New Zealand Certificate in Building, Construction, and Allied Trades Skills (Level 3) [Ref: 3845]

2. CONSIDERATIONS FOR BCATS PROGRAMMES

PROGRAMME APPROACH

BCATS programmes are intended to be delivered in a highly structured environment designed to meet the needs of a wide range of ākonga (learners). Ākonga should be exposed to a range of skills and knowledge relevant to BCATS industries, and an interest in multiple industries should be nurtured from the outset.

Ākonga undertaking BCATS training may include:

- school students
- recent school leavers
- career changers
- migrant workers and international students.

Note: For a 'Trades Academy', where learners are building houses in a workplace setting for several whole days per week, other standards are a more suitable option. These include the Carpentry Level 3 skill standards developed for learners working under supervision, in environments which reflect workplace and industry requirements. In contrast, BCATS in these types of Trades Academies disadvantage ākonga since they do not recognise the carpentry skills that these learners are developing.

Teachers and trainers, association members, industry and other stakeholders have been consulted, and provided support for this programme approach.

Specific requirements for programmes leading to each qualification are outlined later in this *Programme Guidance.*

ASSESSMENT

BCATS learning and assessment should be delivered by someone who has industry expertise in the specific areas of building, construction, and allied trades relevant to the training. Teachers or tutors, verifiers, assessors and internal moderators of BCATS must meet the Consent and Moderation Requirements (CMR) 0120v6 that each skill standard references. Evidence of meeting CMR should be provided upon request.

In terms of assessment, best practice suggests assessments should consider connections across various skill sets. This approach supports a comprehensive evaluation of ākonga skills and abilities, considering how different skill standards relate to each other. In essence, it promotes a more complete and well-rounded assessment.

Ākonga should only be assessed for 'trade worker' skills, such as safety and communication, when they have had the opportunity to practise the skills and repeat them consistently.

For the Level 2 and Level 3 BCATS qualifications, the projects undertaken underpin all knowledge and skills required from the course of study. Appropriate methods to capture project progress

may include drawings and sketches (digital or hand-drawn) developed by the ākonga, sequential visual methods (for example, photographic or video), written documentation (such as a diary), or a combination of any of these methods. Alternative assessment formats may be used that reflect the careful and deliberate use of processes and practices described in *Aromatawai and the Principles of Assessment*.

HEALTH AND SAFETY IN A BCATS ENVIRONMENT

Training providers must protect the health and wellbeing of ākonga, incorporating safe work methods that are relevant to the practical tasks covered in the skill standards at all levels. This includes teaching about safe tool and equipment usage, injury prevention techniques, and proper task execution. At all levels, ākonga are expected to perform tasks safely and use methods that reduce the risk of injury.

Training providers should stay current with the latest methods for carrying out practical tasks safely, which may involve adopting new technologies and tools. It's essential to foster a culture of safety in the workplace.

Schools delivering BCATS programmes are required to comply with *Safety in Technology Education*: *A Guidance Manual for New Zealand Schools* (Ministry of Education, April 2017). This includes legal requirements and responsibilities related to risk management, specifically the safe use of materials, tools, and machinery.

LITERACY AND NUMERACY

Literacy and numeracy skills are intentionally integrated throughout the various levels of skill standards to help ākonga meet the daily demands they'll encounter in building, construction, and allied trades. There are some key concepts central to supporting the development of literacy and numeracy skills:

1. **Using familiar, relevant contexts:** Teaching these skills using situations and examples that are familiar and meaningful in the context of building, construction, and allied trades operations.
2. **Applying learning across contexts:** Ensuring ākonga understand and can reason with the concepts so they can apply them in various situations.
3. **Accuracy requirements:** Clarifying the level of accuracy needed for calculations and written job documentation, such as whether rough estimations or precise measurements are required.

4. **Communication skills:** Developing speaking and writing abilities to effectively communicate while carrying out tasks in building, construction, and allied trades.

WORK READY SKILLS

Below is a list of 'work ready' or 'soft skills' that should be embedded and encouraged in all teaching and learning activities. They are important skills of focus for employers in BCATS industries:

- Awareness of, and safety for, self and others in a construction environment.
- Care and responsibility for personal protective equipment (PPE), and tools, plant, and equipment.
- Timekeeping and organisation of materials and tasks.
- Planning to mitigate any potential issues.
- Responding to feedback constructively.
- Taking the initiative to find solutions to problems.
- Listening to instructions and clarifying understanding as necessary.

CULTURAL COMPETENCE

Getting ākonga ready for a career in building, construction, and allied trades involves understanding that interacting effectively with fellow workers and clients is crucial for success. Programmes should help ākonga develop cultural competence, enabling them to be considerate and adaptable when dealing with people from various backgrounds, identities, and cultures.

In line with the principles of Te Tiriti o Waitangi, programme design and delivery should influence equitable outcomes for ākonga and not present unnecessary barriers. The learning and assessment needs of ākonga Māori should be addressed, including the normalisation of te reo Māori. Additionally, the specific needs of Pacific ākonga should be considered, including the normalisation of Pacific languages.

Tātaiako is a resource available to help teachers to understand and value what is important when taking a Māori world view in relation to teaching ākonga Māori.

3. WHAT IS A SKILL STANDARD?

A skill standard is a specification of skills which includes:

- the learning outcomes associated with the skills
- the level of performance in those skills
- indicative content to be included in programmes
- guidance to support consistent assessment of learning outcomes (at an organisational and national level).

Knowledge and skills in one skill standard may be essential to achieving other skill standards. This *Programme Guidance* recommends the sequence of learning and assessment to take this into account.

Training providers and employers will support ākonga to develop their skills and knowledge in the right sequence. This will help ākonga apply what they learn appropriately across varying levels of complexity, from having little or no prior experience in building, construction, and allied trades to being ready to begin a trades apprenticeship.

Each skill standard specifies the Consent to Assess and National External Moderation requirements. For the Building, Construction, and Allied Trades Skills skill standards, this is included in the current version of CMR 0120.

PARTS OF A SKILL STANDARD

All BCATS skill standards are single learning outcome standards and include achieved, merit, and excellence grades. This means, the **Title, Learning Outcome,** and **Achieved** grading will be consistent.

40560 **Construct timber furniture as a BCATS project**

Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

Hua o te ako | Learning outcomes	**Paearu aromatawai** | Assessment criteria
1. Construct timber furniture as a BCATS project.	a. Timber furniture materials are identified, and a cutting list is prepared according to BCATS project documentation.
	b. Timber furniture is marked out, cut and assembled to meet documentation requirements.
	c. Timber furniture is finished to meet documentation requirements.
	d. Quality control checks are undertaken to confirm project meets documentation requirements.

Ngā momo whiwhinga | *Grades available*

Achieved / Merit / Excellence.

Paetae | Achieved	**Kaiaka** | Merit	**Kairangi** | Excellence
Construct timber furniture as a BCATS project.	Efficiently construct timber furniture as a BCATS project.	Skilfully construct timber furniture as a BCATS project.

Learning Outcomes described in skill standards are generally related to practical aspects of BCATS. Underpinning knowledge learning outcomes are also included to ensure ākonga have the level of capability needed in BCATS industries.

The skill standard's **Assessment Criteria** provides information on the minimum criteria ākonga must demonstrate to be awarded **Achieved**.

Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

Hua o te ako | Learning outcomes	**Paearu aromatawai** | Assessment criteria
1. Construct timber furniture as a BCATS project.	a. Timber furniture materials are identified, and a cutting list is prepared according to BCATS project documentation.
	b. Timber furniture is marked out, cut and assembled to meet documentation requirements.
	c. Timber furniture is finished to meet documentation requirements.
	d. Quality control checks are undertaken to confirm project meets documentation requirements.

Further information is provided below the grade table to describe key information to inform **Merit** and **Excellence** grade judgements.

Ngā momo whiwhinga | *Grades available*

Achieved / Merit / Excellence.

Paetae | Achieved	**Kaiaka** | Merit	**Kairangi** | Excellence
Construct timber furniture as a BCATS project.	Efficiently construct timber furniture as a BCATS project.	Skilfully construct timber furniture as a BCATS project.

Kaiaka/Merit: Efficiently refers to the efficient use of construction techniques and overall attention to detail, resulting in a well-executed project.

Kairangi/Excellence: Skilfully refers to the precise use of construction techniques resulting in a consistent, reliable and visually aesthetic project.

A new feature of skill standards is the **Assessment Specifications**. Assessment Specifications provides key information relevant to clarifying the assessment conditions. For example, assessment expectations or definitions.

Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria

Assessment specifications:

Candidates must complete the project tasks for one item of decorative and/or functional timber furniture. See the BCATS Programme Guidance document for a list of example projects that show an appropriate level of complexity.

It is expected that:

- candidates use a range of construction techniques and tools.
- project documentation for the furniture is provided to candidates.
- minor blemishes in the project do not affect functionality.

Finish refers to the documented final treatment of the project and may include smooth edges and corners, sanding, application of stains, coatings or coverings.

4. SKILL STANDARD LEVELS AND PROGRESSION

The skills and knowledge included in BCATS skill standards are organised into three levels. At each level they are current, relevant, and meaningful to industry's requirements for the ākonga journey.

The BCATS skill standards and qualifications build on the skills specified for the level preceding them. Ākonga undertaking Level 3 BCATS skill standards will have Level 1 and/or 2 BCATS skill standards or have suitable skills to ensure they are well-prepared for the expectations of the higher-level. To be awarded Level 3 BCATS skill standards, ākonga will need to be able to use a range of techniques and tools on familiar and routine tasks under limited supervision.

Below is a description for each skill standard level.

LEVEL 1 – INTRODUCTORY BCATS KNOWLEDGE AND SKILLS

Skill standards at level 1 are designed to recognise skills required to help people stay safe and provide introductory skills and knowledge for building, construction, and allied trades environments.

Projects or tasks at this level should demonstrate basic skills and the use of a limited range of tools, focusing on following instructions and plans to achieve the project outcome. Jointing techniques wouldn't go much beyond the level of complexity involved in finger joints, butt joints, housing joints, dowel joints, mitre joints, and the use of purchased hardware.

Examples of projects include:

- basic tables
- toolboxes
- shelving units
- storage box
- concrete forming
- spice rack
- other trades-related tasks that lead to the completion of a house build (for example, plastering, painting, tiling)

LEVEL 2 – DEVELOPING BCATS KNOWLEDGE AND SKILLS

Skill standards at level 2 recognise skills and knowledge required to work in building, construction, and allied trades. Ākonga will have the opportunity to focus on specific BCATS industries of interest and will require regular supervision.

Projects at this level focus on industry entry skills, using a range of techniques and tools to achieve the project outcome. Complexity of jointing could be lifted to the addition of dovetail, mortise & tenon, and experimentation with creating own hardware such as door handles, runners.

Where projects are completed as a "group", all ākonga are given sufficient opportunity to demonstrate the requirements of the skill standards.

Examples of projects include:

- cape cod chair
- picnic table
- BBQ area
- coffee table
- dog kennel
- slab foundation for a non-consent building or garden shed
- concrete path
- standard pergola
- concrete wall of less than 350mm in height
- bench with garden tool storage
- non-consent shed
- create own paving slabs

LEVEL 3 – BCATS EXPERIENCE, KNOWLEDGE, AND SKILLS

Skill standards at level 3 are intended to recognise skills that would prepare ākonga for entry to a trade apprenticeship. A project will be undertaken to apply the essential skills and knowledge gained through the BCATS programme. At this level, ākonga will be progressing towards working under limited supervision.

Projects at this level should reflect a focus on industry entry skills and complexity, using a wide range of techniques and strategies, materials, and equipment. Jointing techniques demonstrated at this level may include dovetail, hidden mortise & tenon, and other features such as curved edges, moving parts, self-made hinges.

Where projects are completed as a "group", all ākonga must be given sufficient opportunity to demonstrate the requirements of the skill standards.

Examples of projects include:

Individual projects

- angled shelving
- mechanical rocking chair
- mobile workbench
- bespoke bedside cabinet with detailed door paneling
- coffee table with curved legs

Group projects

- children's playground equipment
- outdoor potting/utility shed with interior fit out
- bespoke chicken house for a community garden
- covered pergola space with intricate shape and detail

5. SKILL STANDARDS AS "BUILDING BLOCKS"

The skill standards in this *Programme Guidance* serve as fundamental components that relate to each of the New Zealand Certificates in Building, Construction, and Allied Trades Skills (Levels 1–3) [Refs: 3843–3845]. These new skill standards are replacing the existing unit standards, and there's information available to assist providers in transitioning ākonga from unit standard-based programmes to skill standard-based programmes. This information is outlined in Appendices A-C.

6. DEFINITIONS

TERM	MEANING
Abbreviations and symbols	In the BCATS context, refers to abbreviations and symbols that would appear on a basic single-level house plan.
BCATS environment	Any workplace or context where work or activities related to the building, construction, and allied trades sector take place, such as school workshops, training establishments, outdoor areas, and industry placement workplaces.
BCATS project documentation	Information and instructions (oral, written, graphic) that detail the parameters of, and planning for, a BCATS project. This may include project briefs, project plans, working drawings, specifications, and quality control procedures.
BCATS project-related instructions	Verbal information, written job specifications, cutting lists, working drawings, sketches, and associated building industry communication media.
Industry placement	A student being placed with an organisation to gain experience of what it is like to work within a sector of the building and construction industry.
Materials	Materials that are typically required to complete projects within a BCATS environment. This may include adhesives, coatings, manufactured boards, aluminium, copper, resin, plastic, recycled materials, timber, galvanised steel, stainless steel, sheet materials, glass, masonry, hardware, upholstery (fabric or leather).
Numerical calculations	Calculations suited to BCATS projects, such as algebra, addition, subtraction, multiplication, division, converting fractions to decimal percentages (and vice versa), square, square root, using formulae to calculate area and volume, trigonometry.
Specifications	Documented information and instructions (oral, written, graphic) that detail parameters of and planning for a BCATS project. This may include working drawings, project briefs, project plans, manufacturer's specifications, recommendations or technical data sheets, material specifications, site- or work-specific requirements, specifications from a specialist source such as an architect, designer or a supervisor.
Working drawings	Set of drawings associated with a construction project, which may include plans, elevations, sections, details, or any other drawings that give information about the project.
Workplace practice	Procedures specific to a BCATS environment, which cover the standards and required practices of that environment.

7. LEGISLATION AND GUIDELINES

Legislation (accessed at www.legislation.govt.nz)	
Title	**Purpose**
Health and Safety at Work Act 2015	To provide for a balanced framework to secure the health and safety of workers and workplaces.
Health and Safety at Work (General Risk and Workplace Management) Regulations 2016	To prescribe matters relating to work groups and other parties to support more effective worker participation.

Guidance for schools (available at tki.org.nz)	
Title	**Purpose**
Safety in Technology Education: A Guidance Manual for New Zealand Schools (Learning Media, Ministry of Education, 2014)	Provides teachers, principals, and Boards of Trustees with the guidelines and information necessary to establish and implement sound health and safety policies and procedures for technology teaching and learning.

8. SKILL STANDARD SUPPORTING ASSESSMENT COMMENTARY

The skill standards for BCATS Level 1-3 include **achieved**, **merit**, and **excellence** grades. This supporting commentary is designed to support consistency of interpretation and grade assessment for these skill standards.

The skill standard **Assessment Criteria**, **Assessment Specifications,** and **Indicative Content** contain information, definitions, and requirements that are crucial when interpreting the standard and assessing candidates against the learning outcomes.

USING SUPPORTING ASSESSMENT COMMENTARY

This resource is intended to support the requirements described in the skill standard and provide indicative examples to support assessment guidance.

The **description, indicators** specified, and **examples** are meant to serve as guidelines rather than a strict checklist. They help provide direction and ensure that key aspects are considered, but they allow for flexibility and adaptation based on specific needs and contexts.

The tools, tasks, and projects described in the **examples** do not define the level of performance. Rather, it is the application of skill as described in the standard that determines the grade. The examples are illustrative, not exhaustive.

FINAL AWARD OF GRADES

Final grades are to be decided using professional judgement based on a holistic evaluation of the evidence provided against the criteria in the skill standard by the assessor.

LEVEL 1 SKILL STANDARDS

40540: Use safety practices for a BCATS project or related tasks

This skill standard recognises the skills to implement safety practices during a project or related tasks for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not demonstrate the necessary skills to use safety practices for a BCATS project or related tasks. The candidate does not identify hazards or follow appropriate control measures and safety protocols, leading to unsafe work practices and a failure to meet project requirements.

Indicators for Not Achieved:

- Hazards in the BCATS environment are not identified.
- Safety controls are not implemented, resulting in unsafe work practices.
- Safe practices for the use of tools and equipment are not followed.
- Personal protective equipment (PPE) is not used appropriately.
- Limited understanding of health and safety responsibilities is demonstrated.
- The work area is not maintained, and follow-up procedures such as cleaning and tool care are not carried out.

Paetae | Achieved

The candidate successfully uses safety practices for a BCATS project. The candidate identifies hazards, demonstrates an understanding of safety protocols, and follows established safety controls while undertaking a project.

Indicators for Achieved:

- Hazards and basic control measures in the BCATS environment are identified.
- Personal protective equipment (PPE) is selected and used according to instructions.
- Project tasks are completed with regard for personal safety and the safety of others.
- The work area is maintained in a tidy condition, and tools and equipment are cared for properly.

For example: The candidate identifies common hazards in the workshop, such as sharp tools and cluttered workspaces. They wear PPE, such as protective footwear and protective eyewear, while operating the bandsaw. They consider their own personal safety by following safe operating procedures with machinery and equipment while undertaking project tasks. The candidate ensures the workspace is tidy by removing tripping hazards such as offcuts of timber and properly storing tools after use. They follow basic safety procedures and complete follow-up actions like wiping down the workbench and storing PPE, although some minor areas for improvement in safety awareness remain.

Kaiaka | Merit

The candidate consistently applies safety practices, showing personal responsibility for consistent application in a BCATS environment. Hazards are identified, and appropriate control measures are applied.

Indicators for Merit:

- Hazards and basic control measures in the BCATS environment are identified and managed.
- Personal protective equipment (PPE) is selected appropriately and used consistently.
- Safe work practices are applied throughout the project tasks, with personal responsibility taken.
- The work area is clean and organised, and tools and equipment are cared for properly.

For example: The candidate demonstrates safety practices while completing project tasks. They independently identify common hazards, such as loose cords and unguarded machinery, and take appropriate actions, such as keeping cords away from the work area and reporting missing guards. The candidate consistently wears PPE, such as protective footwear and a dust mask when sanding. Their understanding of safety protocols is reflected in their careful approach to tool operation. They complete follow-up procedures such as returning tools to designated storage and maintaining a tidy workspace, showing personal responsibility for their own safety and that of others.

Kairangi | Excellence

The candidate proactively uses safety practices, contributing to an effective working environment. Hazards identification and management enhances the efficiency and safety of the working environment.

Indicators for Excellence:

- Hazards in the BCATS environment are identified and controlled efficiently.
- Proactive safety practices are demonstrated consistently throughout project tasks.
- PPE is used correctly at all times.
- Tools and equipment are used safely and effectively.
- Work area is clean and organised, contributing to a safe and effective workspace.

For example: The candidate takes responsibility for health and safety practices while completing project tasks. They are proactive in identifying potential hazards and consistently use PPE. They implement control measures, such as ensuring proper ventilation, eye protection, and the correct dust mask when working with dust-generating materials. The candidate maintains an organised and clean workspace throughout the project. They demonstrate safe practices that contribute to the overall efficiency and safety of the working environment.

40541: Use materials for a basic BCATS project or related tasks

This skill standard recognises the knowledge, and safe use, of materials for a project or related tasks for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not demonstrate the necessary skills to use basic materials in a BCATS project, resulting in a failure to meet project requirements. Materials are not identified and described, and the candidate does not adhere to safe handling practices, leading to potential hazards in the workspace.

Indicators for Not Achieved:

- Different types of materials are not correctly identified or described.
- Methods of timber preservations, treatments and applications are not identified or described.
- Safety protocols for handling and storing materials are not followed.
- Limited understanding of the purposes and limitations of materials is demonstrated.

Paetae | Achieved

The candidate successfully uses materials, including timber, in a basic BCATS project. They describe basic materials, and their uses. They follow safe handling and storage practices, ensuring materials are protected from damage.

Indicators for Achieved:

- Different types of materials, including timber, are described
- Uses and limitations of different types of materials are described.
- Methods of timber preservations, treatments and applications are identified and described.
- Safe handling practices for materials are followed.
- Materials are stored safely to prevent damage.
- Basic processes and techniques, using a limited range of tools are demonstrated.

For example: The candidate successfully describes the basic materials used in constructing a concrete planter box for outdoor use. They recognise essential components, including ready-mix concrete, reinforcing mesh and timber for the formwork. They select the correct type of timber for the formwork and describe why other timber options would not be suitable. The candidate follows expected safe handling practices by wearing gloves and ensuring that tools are used correctly during the mixing and pouring processes. They show an understanding of the purposes and limitations of the materials, such as knowing that the concrete needs time to cure and that drainage is crucial to prevent waterlogging. They store materials such as mesh and timber in dry, elevated areas to prevent deterioration.

Kaiaka | Merit

The candidate demonstrates an understanding of materials, including timber, examining their suitability for a specific BCATS project. They use safe and effective methods to handle and

store materials, preventing damage. The candidate uses tools and equipment appropriately that suits the purposes and limitations of different materials.

Indicators for Merit:

- Different types of materials, including timber are examined for their suitability for project tasks.
- Uses and limitations of different types of materials are examined for their suitability for project tasks.
- Methods of timber preservations, treatments and applications are examined for their suitability for the project.
- Safe and efficient handling and storage of materials are demonstrated.
- Processes and techniques, using a limited range of tools, are demonstrated.

For example: The candidate examines different types of timber and confirms the use of macrocarpa timber for a storage box. They note its natural resistance to decay, making it suitable for outdoor conditions, where the box will be situated. The candidate also recognises the importance of using rust-resistant fixing methods and hinges to ensure durability and functionality in a wet environment. Throughout the project, the candidate consistently applies safe handling practices, when working with materials using tools and equipment, and stores materials in an organised and efficient way. The candidate effectively uses the materials, demonstrating care in assembly, considering the correct methods of timber conservation.

Kairangi | Excellence

The candidate skilfully uses materials for a basic BCATS project. They demonstrate an understanding of materials, including timber, and apply them with precision suited to the specific BCATS project. They demonstrate safe handling and storage of all materials to ensure materials are protected from damage.

Indicators for Excellence:

- Different types of materials, including timber are examined for their suitability for project tasks.
- Uses and limitations of different types of materials are examined for their suitability for project tasks.
- Methods of timber preservations, treatments and applications examined if required for the project.
- Safe handling, precise use, and appropriate storage of materials are demonstrated consistently.
- Processes and techniques, using a limited range of tools are demonstrated.

For example: The candidate demonstrates a thorough understanding of materials in constructing a tray by selecting and using dressed pine, employing precise techniques such as dowel joints for a strong and seamless assembly. They exhibit a thorough understanding of the properties of dressed pine, noting its suitability for indoor use due to its durability and ease of finishing. During the assembly, the candidate skilfully handles the materials and applies accurate techniques to create a high-quality finished product. Throughout the project, the candidate consistently applies safe handling practices, when working with materials using tools and equipment, keeping materials stored safely when not in use.

40542: Use hand tools for a BCATS project or related tasks

This skill standard recognises the skills to select, use, and maintain hand tools in a project or related tasks for building, construction, or allied trades.

Kāore i eke | Not Achieved

The candidate does not demonstrate the necessary skills to identify, select and safely use hand tools appropriately for a BCATS project, resulting in a failure to meet project requirements.

Indicators for Not Achieved:

- Appropriate hand tools for tasks are not identified or selected.
- Personal protective equipment is not used or according to manufacturer's instructions.
- Tools are not used safely or with appropriate technique, leading to unsafe conditions.
- Tools are not cleaned and stored properly between uses, resulting in damage or rust.
- Damaged or faulty tools are not identified, compromising safety and effectiveness.

Paetae | Achieved

The candidate selects and uses appropriate hand tools for a BCATS project to meet the project requirements. They demonstrate safe handling of tools, appropriate selection of personal protective equipment, and practices to maintain tools used.

Indicators for Achieved:

- Appropriate hand tools are selected based on task requirements.
- Personal protective equipment is used correctly.
- Tools are used safely, with acceptable techniques, to complete project tasks.
- Tools are cleaned and stored properly between uses, ensuring they are free of rust and dirt.
- Basic identification of damaged or faulty tools is demonstrated.

For example: The candidate uses a panel saw and chisel to construct a simple wooden box. They also select appropriate personal protective equipment when using the panel saw, including safety glasses. The candidate applies acceptable techniques when using the panel saw by positioning the wood on a stable work surface and securely clamping it. They apply steady pressure while making straight cuts, demonstrating appropriate technique. The candidate uses the chisel to refine the edges, holding it at the correct angle and applying controlled force to avoid damaging the wood. After completing the project, the candidate cleans the tools thoroughly to remove any wood shavings and moisture, and stores them properly in the designated storage area, ensuring they remain in good condition for future use.

Kaiaka | Merit

The candidate consistently selects and uses tools effectively for tasks, employing safe handling techniques, throughout the project. They use effective techniques for a quality finished product. They apply effective maintenance practices to ensure the tools are in optimal condition, contributing to the overall longevity of the tools.

Indicators for Merit:

- Hand tools are selected based on task requirements and are consistently used safely.
- Personal protective equipment (PPE) is selected and used according to safety standards.
- Effective techniques of tools are demonstrated throughout the project.
- Tools are maintained consistently, including cleaning and correct storage.
- Damaged or faulty tools are identified and reported according to worksite requirements.

For example: The candidate constructs a birdhouse using a tenon saw on rough-sawn macrocarpa. They utilise a marking-out gauge to mark the dimensions for the cuts, ensuring the measurements align for the birdhouse's sides and base. When using the tenon saw, the candidate demonstrates effective technique by securing the wood with clamps on a stable work surface and applying steady, controlled strokes to make clean cuts. They maintain a consistent angle throughout the sawing process to minimise splintering and ensure edges align. The candidate identifies their selection of tools based on the requirements for the project and applies safe handling practices throughout the process. After use, the candidate ensures tools are cleaned and stored correctly, demonstrating attention to detail and care.

Kairangi | Excellence

The candidate demonstrates skill and precision in their tool use for a BCATS project. They assess the requirements of each task to choose the most optimal tools, applying techniques to ensure precise use to complete the project to a high standard. The candidate effectively manages tool maintenance by cleaning, ensuring proper storage, and inspections to ensure all tools remain in optimal condition.

Indicators for Excellence:

- Different hand tools are selected and justified for their suitability in the project.
- Tools are consistently used safely (including use of PPE) with proficiency.
- Tools are used with precision and expertise, consistently meeting project requirements.
- Tools are maintained to a high standard, ensuring cleanliness and functionality.
- Damaged or faulty tools are identified and reported according to worksite requirements.

For example: The candidate constructs wooden shelving selecting a variety of hand tools, including a tenon saw and a smoothing plane, with justifications based on the desired finish and functionality. When making the mitre cuts they use the tenon saw with accuracy, carefully aligning the blade to achieve the correct angle. They apply steady pressure and a smooth sawing motion, resulting in clean, sharp edges that align well. The candidate employs the smoothing plane to refine the finished surfaces, skilfully adjusting the depth of the cut to create an even finish. Throughout the project, they ensure all safety protocols are adhered to.

The candidate ensures all tools are thoroughly cleaned after use and stored in optimal condition.

40543: Use basic power tools for a BCATS project or related tasks

This skill standard recognises the skills to use power tools for a project or related tasks for building, construction, or allied trades.

Kāore i eke | Not Achieved

The candidate does not demonstrate the necessary skills to identify, set up and safely use power tools appropriately for a BCATS project, resulting in a failure to meet project requirements.

Indicators for Not Achieved:

- Power tools are not identified or are incorrectly selected for project tasks.
- Personal protective equipment is not used according to manufacturer's instructions.
- Tools are not set up or used safely, leading to unsafe conditions.
- Tools are not cleaned and stored properly between uses, resulting in damage or rust.
- Damaged or faulty tools are not identified, compromising safety and effectiveness.

Paetae | Achieved

The candidate successfully identifies and uses appropriate power tools for a BCATS project, meeting project requirements. They demonstrate safe handling and set up of tools and use personal protective equipment correctly. They follow safe techniques to complete project tasks and carry out basic care of tools.

Indicators for Achieved:

- Appropriate power tools are identified and selected based on task requirements.
- Personal protective equipment is used correctly.
- Tools are set up and used safely, following the manufacturer's instructions.
- Tools are set up and used safely using appropriate techniques.
- Tools are cleaned and stored properly between use, ensuring they are free of dust, rust, and power sources.
- Basic identification of damaged or faulty tools is demonstrated**.**

For example: The candidate uses a battery-operated drill and jigsaw to construct a simple coffee table. They select appropriate personal protective equipment, including safety glasses and hearing protection. When using the battery-operated drill, the candidate demonstrates acceptable techniques by ensuring the drill bit is securely attached and the material is clamped firmly to prevent movement. They apply steady pressure while drilling, demonstrating control and precision. The candidate uses the jigsaw to cut the tabletop, maintaining a consistent speed and following the marked line accurately. After completing the project, the candidate cleans the tools thoroughly and stores them correctly, checking for any signs of tool damage or wear.

Kaiaka | Merit

The candidate effectively uses appropriate tools for project tasks to achieve a quality finish. They employ safe handling techniques, including the proper use of personal protective equipment (PPE), throughout the project. They are able to identify and report any damaged or faulty tools and demonstrate care of tools by cleaning and storing them appropriately.

Indicators for Merit:

- Power tools are identified and selected based on task requirements.
- Personal protective equipment is used effectively.
- Safe techniques for power tool use are demonstrated to achieve a quality finish
- Effective techniques of tools are demonstrated throughout the project.
- Tools are cleaned and stored properly between use, ensuring they are free of dust, rust, and removed from power sources.
- Tools are checked for faults or damage and identified as unsuitable where appropriate.

For example: The candidate constructs a storage box using a battery-operated router, and handheld sander. When using the router, the candidate demonstrates effective technique by securing the wood with clamps on a stable work surface, adjusting the router depth appropriately to achieve the desired finish. They maintain control throughout the routing process to create smooth edges. After routing, the candidate employs the handheld sander to finish the surfaces of the storage box. They select the appropriate sandpaper grit and adjust the sander's settings to ensure an even and polished finish. Throughout the sanding process, they use steady, even pressure, moving the sander in the direction of the wood grain to avoid uneven surfaces. The candidate identifies their selection of tools based on the requirements for the project and applies safe handling practices throughout the process. After use, the candidate ensures all tools are cleaned and stored correctly, and notes wear on a router bit and sets it aside for replacement, demonstrating attention to detail and care.

Kairangi | Excellence

The candidate selects and skilfully uses power tools for a BCATS project, demonstrating precision in their work. They assess the requirements of each task to choose the most optimal tool and demonstrate consistently safe practices with all power tools throughout the project.

Indicators for Excellence:

- Different power tools are optimally selected based on task requirements.
- Personal protective equipment is used consistently.
- Tools are used safely with proficiency.
- Tools are used with precision to achieve a high-standard finish.
- Tools are cleaned and stored properly between use, ensuring they are free of dust, rust, and power sources.
- Damaged or faulty tools are identified and reported according to worksite requirements.

For example: The candidate constructs a small coffee table using dressed timber. They select optimal power tools, including a router and a biscuit jointer, correctly identifying the selection based on the desired finish and structural integrity. The router is skilfully used on the tabletop to add decorative edge details, maintaining a steady hand to ensure precise, smooth finishes along the edges. They use the biscuit jointer to create precise slots on the underside of the

tabletop and the tops of the legs for joining. They carefully align the biscuit jointer and ensuring the slots are positioned correctly to provide a strong and stable connection. Throughout the project, the candidate follows safety practices, wearing personal protective equipment. They ensure all tools are thoroughly cleaned and stored correctly.

40544: Carry out construction processes for a BCATS project or related tasks

This skill standard recognises the skills to carry out fundamental construction processes in a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not demonstrate the necessary skills to carry out construction processes appropriately for a BCATS project, resulting in a failure to meet project requirements. The candidate fails to recognise the correct procedures and does not complete tasks within the specified tolerances.

Indicators for Not Achieved:

- Components are not marked out according to project documentation.
- Cutting and shaping processes do not meet the required tolerances.
- Components are not checked for suitability, and assembly methods are incorrect or out of sequence.
- Finishing processes are inadequately completed, failing to meet project specifications.
- Evaluations of project processes are superficial or missing.

Paetae | Achieved

The candidate successfully carries out construction processes to complete a BCATS project. The candidate reflects awareness of the importance of accuracy and quality in their work through a basic evaluation, identifying processes, strengths and areas for improvement in the project.

Indicators for Achieved:

- Material measurements are accurately marked out according to project documentation.
- Cutting and shaping processes are completed within specified tolerances.
- Components are checked for suitability and assembled using appropriate methods in sequence.
- Materials are prepared and finishing processes are carried out adequately to complete the project.
- A brief evaluation of project processes, strengths, and areas for improvement is provided.

For example: The candidate constructs a simple bookshelf by marking out the measurements for the wooden shelves and sides according to the project documentation. They use a panel saw to cut the timber accurately, ensuring the cuts are within the specified tolerances. The candidate checks each component for suitability before assembly and uses wood glue and

screws to secure the joints properly. After completing the project, they provide a brief evaluation of the process, noting their strengths in cutting accuracy and areas for improvement in time management.

Kaiaka | Merit

The candidate efficiently carries out construction processes to complete a BCATS project, with attention to detail. They effectively evaluate their performance, applying their knowledge to ensure that all aspects of the project meet the required standards, and are able to identify strengths and areas for improvement.

Indicators for Merit:

- Material measurements are marked out with precision according to project documentation.
- Cutting and shaping processes are completed with care, achieving suitable tolerances.
- Components are thoroughly checked for suitability and assembled with attention to detail.
- Finishing processes are completed effectively, enhancing the overall quality of the project.
- An in-depth evaluation of project processes, strengths, and areas for improvement is provided when compared with project requirements.

For example: The candidate constructs a storage shoe box carefully marking out the dimensions on plywood for the box structure, as well as foam and fabric for the upholstered top, based on the project specifications. Using a jigsaw, they cut the plywood pieces ensuring all edges are smooth and fit together seamlessly. The candidate assembles the box, verifying components align correctly before securing them with screws and wood glue. They prepare the upholstered top by cutting the foam and fabric to size, wrapping the foam around the edges and securely fastening it underneath to create a comfortable seat. The candidate identifies their strengths in achieving a sturdy and aesthetically pleasing finish while noting that they could improve on material waste and their time management in future projects.

Kairangi | Excellence

The candidate skilfully carries out construction processes to complete a BCATS project, demonstrating attention to detail. They ensure all tasks are completed to a high standard. The candidate evaluates their performance effectively by identifying strengths and areas for improvement, proposing alternative methods and enhancements.

Indicators for Excellence:

- Material measurements are marked out accurately and consistently according to project documentation.
- Cutting and shaping processes are completed with a high level of precision.
- Components are assessed thoroughly for suitability and assembled with a focus on quality.
- Finishing processes are executed to achieve a high-quality finish.
- A comprehensive evaluation of project processes is provided, including considerations for alternative methods and potential improvements.

For example: The candidate constructs a coffee table using a steel frame and a macrocarpa tabletop, carefully marking out precise measurements. They cut and weld the steel components with precision, ensuring an aligned and sturdy structure. The candidate applies a paint finish to the steel, showcasing their attention to detail by achieving a smooth and even coating. The macrocarpa top is attached securely, sanded and polished, completed to a high

level of finish. The evaluation is comprehensives and considers alternative methods for both the welding and finishing stages and suggesting improvements for future projects. They reflect on their strengths in achieving a high-quality finish and their attention to detail in the construction of the table.

40545: Use hardware and fastenings for a BCATS project or related tasks

This skill standard recognises the skills to use hardware and fastenings in a project for building, construction, and allied trades

Kāore i eke | Not Achieved

The candidate does not demonstrate the necessary skills to identify, select, and use hardware and fastenings appropriately for a BCATS project, resulting in a failure to meet project requirements. The candidate does not apply appropriate techniques for joining components.

Indicators for Not Achieved:

- Hardware and fastenings are not selected appropriately according to project documentation.
- Project components are not joined or held securely.
- Basic understanding of the properties and purposes of selected hardware is lacking.
- Documentation of processes is minimal.

Paetae | Achieved

The candidate successfully selects and uses appropriate hardware and fastenings for a BCATS project. They demonstrate the ability to follow instructions, ensuring that components are joined or held in place.

Indicators for Achieved:

- Hardware and fastenings are selected as identified in project documentation.
- Project components are joined or held secure using hardware and fastenings as instructed.
- Basic understanding of the properties and uses of selected hardware is demonstrated.

For example: The candidate constructs a small wooden shelf by selecting suitable hardware and fastenings, including screws and brackets. They demonstrate an understanding of how each component contributes to the overall stability of the shelf. The candidate follows the project documentation to mark out where the brackets will be attached, ensuring they are positioned for maximum support. They use an impact driver to drive the screws through the brackets into the shelf, applying consistent pressure to ensure the screws are securely fastened without over-tightening. The candidate checks that all components are joined appropriately, confirming that the shelf is stable and able to support weight.

Kaiaka | Merit

The candidate demonstrates a strong understanding of hardware and fastenings by selecting and using appropriate fixings efficiently. They use hardware and fastenings to

ensure components are joined or held in place fora strong and secure connection between components.

Indicators for Merit:

- Hardware and fastenings are selected as identified in project documentation.
- Hardware and fastenings are used consistently to ensure a strong and secure connection between components.
- An understanding of the purposes and uses of different types of hardware and fastenings is documented.

For example: The candidate constructs a storage box using various hardware and fastenings, including hinges, screws, and PVA wood glue, selected based on the project requirements. They carefully follow the project documentation to ensure that all hardware and fastenings are installed correctly, demonstrating their understanding of how each component contributes to the overall structure. The candidate applies PVA wood glue to the adjoining timber edges before securing them with screws. They demonstrate attention to detail by ensuring that the screws are countersunk and that the hinges are aligned properly for smooth operation. They demonstrate their understanding of the purposes and uses of different types of hardware and fastenings.

Kairangi | Excellence

The candidate demonstrates a comprehensive understanding of the project requirements to select and use hardware and fastenings that are optimal for a BCATS project. They demonstrate skilful use of the selected hardware and fastenings fora reliable and durable connection between components.

Indicators for Excellence:

- A range of hardware and fastenings are selected as identified in project documentation.
- Hardware and fastening are used proficiently to ensure a reliable and durable connection between components.
- Techniques to join materials and secure hardware and fastenings are precise.

For example: The candidate constructs a letterbox using a combination of wood and metal components, incorporating latches, hinges, handles, and screws for functionality and security. They accurately select and apply the appropriate hardware and fastenings, demonstrating proficiency in measuring and marking before installation. The candidate justifies their choices by explaining that the use of hinges allows for easy access to the letterbox, while the latch ensures that it remains securely closed. They opt for screws to provide a strong connection between the wooden structure and the metal components, ensuring durability against weather conditions.

40546: Create joints for a BCATS project or related tasks

This skill standard recognises the skills to create joints in a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate fails to recognise the correct joint types or methods needed for a BCATS project and does not assemble joints to the required specifications.

Indicators for Not Achieved:

- Joint types are not identified according to project documentation.
- Jointing methods used are unsuitable for the project's joint types.
- Joints are not assembled correctly, leading to misalignment or movement of components.
- Basic understanding of joint quality and its significance is lacking.

Paetae | Achieved

The candidate successfully creates joints for a BCATS project, demonstrating a basic understanding of joint types and methods. They follow instructions accurately to meet project requirements.

Indicators for Achieved:

- Joint types are considered and identified from project documentation.
- Jointing methods used are suitable for the project's joint types.
- Joints are assembled to align and prevent movement of components, meeting project requirements.

For example: The candidate identifies joint types from the project documentation and constructs a simple wooden box using both butt joints and dowel joints. The candidate measures and marks the wood for cutting, ensuring that the cuts will fit at the corners of the box. They use a panel saw to make cuts at right angles on the ends of the timber pieces for the butt joints and drill holes for the dowels to secure the connection between the base and the sides. After cutting, they align the pieces to ensure that the edges are flush and that there are minimal gaps. The candidate applies wood glue to the ends of the joints and inserts dowels before securing them with additional adhesive for strength. They check that all components are assembled correctly.

Kaiaka | Merit

The candidate consistently selects and uses appropriate methods to create strong and secure joints. They pay attention to detail, ensuring that the joints support weight, and all components fit together accurately.

Indicators for Merit:

- Joint types are selected as identified in project documentation.
- Jointing methods are used consistently to create a strong and secure join between components.

- Joints are created with evident attention to detail.

For example: The candidate identifies joint types from the project documentation and constructs a bedside drawer using dovetail joints for the corners and a dado joint for the bottom panel. The candidate accurately measures and marks the wood for cutting. They use a chisel to create the dovetail joints, ensuring they fit together and align accurately at the corners of the drawer. For the dado joint, they use a panel saw to cut lines to the correct depth. Using a chisel and router planer, they create grooves into the sides of the drawer to securely hold the bottom panel. After assembling the joints, they check that all edges are flush and aligned correctly, and that the joints are strong and secure.

Kairangi | Excellence

The candidate exhibits exceptional skills in creating joints for a BCATS project. They demonstrate precise techniques for jointing methods to create reliable and durable joints with a high-quality finish.

Indicators for Excellence:

- Joint types are selected as identified in project documentation.
- Jointing methods are used precisely to create a reliable and durable join between components.
- Jointing methods ensure a high-quality finish.

For example: The candidate constructs a sophisticated coffee table with a box steel frame, welding T joints and corner joints for the legs and frame members, identifying the joint types from the project plan. They select this method for its strength and suitability for metal construction. The candidate demonstrates precision in measuring and cutting the steel pieces, ensuring that the edges are clean and perfectly aligned for seamless connections. Using a MIG welder, they join the metal pieces, carefully controlling the heat and speed to achieve strong, clean welds that ensure the structural integrity of the table. The candidate assesses each joint during the welding process, checking for proper alignment and ensuring that the welds penetrate adequately for maximum strength.

40547: Apply basic measurement and calculations to a BCATS project or related tasks

This skill standard recognises the skills to apply basic measurement and calculations to the completion of a basic project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate fails to identify project requirements and apply basic measurements and calculations appropriately for a BCATS project, resulting in a failure to meet project requirements.

Indicators for Not Achieved:

- Project requirements are not identified from BCATS project documentation.
- Basic measurements and calculations used are unsuitable for solving the problem to meet project requirements.
- Results are not interpreted or recorded appropriately for the project.

Paetae | Achieved

The candidate successfully applies basic measurements and calculations to complete a BCATS project, demonstrating an understanding measurements and calculations required throughout the project.

Indicators for Achieved:

- Measurements are identified from BCATS project documentation.
- Basic measurements and calculations used are suitable for solving project related problems.
- Results are interpreted and recorded appropriately for the project.

For example: The candidate constructs a simple shelving unit, identifying the project requirements outlined in the documentation. The candidate uses basic calculations to determine the total length of wood needed and records the measurements and calculations in their project documentation. They measure and mark the dimensions for the shelves using a tape measure and square. Their cuts are suitable for constructing the shelving unit with allowable tolerances. The candidate records all basic measurements and calculations used to construct the shelving.

Kaiaka | Merit

The candidate uses effective and accurate methods of measurement and calculations for problems related to the project requirements. They consistently pay attention to ensure suitable application to the project.

Indicators for Merit:

- Consistent selection and interpretation of measurements from BCATS project documentation.
- Effective measurement and calculation methods are applied consistently, meeting the requirements of the project.

- Results are interpreted and recorded accurately for the project.

For example: The candidate constructs a storage box and identifies the project specifications from the documentation. The candidate performs calculations to determine the amount of material required, including allowances for cuts and joins, and documents these calculations. They correctly record a cutting list and demonstrate knowledge of basic project costs from given material price lists. They measure the lengths and widths of the wood accurately, using a square and tape measure to ensure proper alignment. They demonstrate good practice by checking measurements before cutting. They work to appropriate tolerances and record any variances.

Kairangi | Excellence

The candidate skilfully applies basic measurement and calculations to precise methods of measurement and calculation, demonstrating an understanding of their application to the project.

Indicators for Excellence:

- Fluency with selection and identification from BCATS project documentation.
- Fluency and precision with application of basic measurements and calculations applied to the project.
- Results are interpreted and recorded relevant to the project requirements.

For example: The candidate constructs a coffee table, interpreting the project plan using scale to convert measurements from the drawing for a materials list. They create a cutting list based on the specifications provided, ensuring the timber required is accurately calculated, including allowances for cuts and joins. The candidate uses geometry to calculate the angles for the table's legs and frame, ensuring they fit together correctly. They take precise measurements of the timber, calculating the lengths needed for each component and documenting these calculations clearly. The candidate demonstrates good practice by checking measurements before cutting and sharpening measuring and marking equipment before use to ensure accuracy. They measure and mark accurate placements for fixings, ensuring precision in their work. They thoroughly document their measurements, and any adjustments made throughout the process, including any variances from the cutting list.

40548: Use trade language to progress a BCATS project or related tasks

This skill standard recognises the skills to use trade language to progress a project or related tasks for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not use and respond to trade language to progress a BCATS project or related tasks. Instructions related to the project are either not received or confirmed clearly. The candidate struggles to communicate project-related information to others in a timely manner.

Indicators for Not Achieved:

- Instructions related to the project are not received or confirmed appropriately.
- Information is not passed on to relevant parties, or communication is unclear or delayed.
- Feedback is not acknowledged or responded to inappropriately.
- Candidate does not have a clear understanding of trade terminology and language.

Paetae | Achieved

The candidate successfully uses trade language to receive project-related instructions and to progress project activities. They participate in group activities to achieve project outcomes, and feedback is received and responded to in a manner that meets the requirements of the task.

Indicators for Achieved:

- Project-related instructions are received and confirmed.
- Information is passed on clearly and the correct level of detail for the purpose, though with occasional lapses in timing or clarity.
- Appropriate communication points and methods are used to pass on information.
- Feedback is acknowledged, with appropriate responses related to the task.

For example: The candidate receives project-related instructions for constructing a concrete planter box and confirms their understanding by asking relevant questions. They pass on information to team members in a timely manner, ensuring that tasks are completed correctly as required. The candidate uses trade language in their suggestions, such as ensuring the correct measurements for the box's dimensions and reinforcing the concrete. Feedback from the others is understood, with the candidate responding by making necessary adjustments to their work, such as modifying the mixing ratio for the concrete to achieve better consistency. There were occasional delays in communication, such as misunderstandings over the materials to be used, or instances where further clarification could have improved the outcome, for example, that were remedied.

Kaiaka | Merit

The candidate uses and responds to trade language effectively to convey information related to the project, with clarity and understanding. The candidate responds to feedback appropriately with a clear understanding of how to improve task requirements.

Indicators for Merit:

- Clear and timely communication is demonstrated in receiving and conveying project-related information.
- Feedback is received and interpreted to adjust and improve the work.
- Effectively used communication points and methods to pass on information in a timely manner.
- The candidate consistently shows a clear understanding of trade specific language.

For example: The candidate receives project instructions for constructing a shelving unit and confirms their understanding through active listening or questioning, ensuring all aspects of the task are clear before proceeding. They communicate project related techniques, demonstrating timely communication to improve project outcomes. The candidate effectively contributes suggestions using clear language on how to improve the design for better stability and functionality, ensuring the shelving unit meets both the design specifications and practical needs. Feedback from the supervisor or team is received and used to improve the quality of the work, such as using different machinery to complete a task. The candidate demonstrates a strong understanding of appropriate methods of communication and trade language to contribute to progressing the project.

Kairangi | Excellence

The candidate skilfully communicates using and interpreting trade information to progress a BCATS project or related tasks. Feedback is acknowledged and responded to efficiently, with improvements made to the work based on constructive input.

Indicators for Excellence:

- Communication methods are fluent, with information conveyed and received effectively.
- Timely and fluency of use and interpretation of trade language for progressing project requirements.
- Effective understanding to feedback is efficient and lead to meaningful improvements in the task or project.

For example: The candidate receives instructions for constructing a picnic table and confirms their understanding by identifying timing of tasks and seeking clarification where necessary, ensuring understanding of the project requirements. They communicate timely information in the BCATS environment, such as communicating hazards or identifying safe procedures for others. The candidate actively engages in discussions and contributes to resolving any issues that arise, such as adjusting the design to improve stability and ease of assembly. Feedback from the supervisor and team members is received and responded to quickly, with the candidate making clear adjustments to the project, such as refining joint connections for a stronger structure. The candidate demonstrates excellent understanding of trade language throughout project tasks, fostering a safe and productive BCATS environment, and ensuring the project meets the required standards.

40549: Identify BCATS trades involved in the construction of a residential building

This skill standard recognises knowledge of building, construction, and allied trades involved in the construction of a residential building.

Kāore i eke | Not Achieved

The candidate does not demonstrate sufficient knowledge of the construction trades involved in the main stages of building a residential building. There is limited understanding of how key trades are involved in the construction process.

Indicators for Not Achieved:

- Key construction trades are not identified, or several trades required for main construction stages are missing.
- Contributions of trades to the completion of the project are not described or are incorrect.
- Sequence of the trades' work is not identified or is inaccurate.

Paetae | Achieved

The candidate successfully identifies key construction trades involved in the completion of the main stages of a residential building. The trades are identified in terms of their contributions, and the sequence of their work is identified at a basic level.

Indicators for Achieved:

- Key trades involved in the main stages of construction of a residential building are identified.
- Basic contributions of each trade to the overall project are described.

For example: The candidate identifies key trades who are responsible for the foundations, structural elements, weathertightness and building finishing in residential construction. The builder's role is described as project managing the build process, constructing the pre framed walls, roof trusses and interior finishing including architraves, door installation and stair railings. They state that foundations are completed by a concrete foundation pourer, and the roof is installed by a roofer. The candidate identifies the plumber's role involved installing the piping for water and waste systems and fit-off of bathroom fixtures and fittings alongside the tiler. They state the role of the painter in terms of both the aesthetic finish and the exterior weathertightness of the building. The contribution of these trades is explained at a basic level, showing understanding of the construction flow.

Kaiaka | Merit

The candidate effectively identifies the sequential contributions of multiple construction trades to the successful construction of the main stages a residential building. The candidate identifies the roles and responsibilities of the key trades involved, including the work they do and how they contribute to the building process. The sequence of trades' work is explained in the context of the construction process.

Indicators for Merit:

- Sequence of trades' work includes clear information for how they relate to the construction process.
- Detail of the roles and contributions of multiple trades showing a deeper understanding of the process to construct a building.
- Identifies how different trades intersect and contribute to the overall completion of the building.

For example: The candidate demonstrates an understanding of the sequential roles and interdependencies of various trades in residential construction. They provide detail on the builder's role initiating and managing the build project including establishing the foundation and erecting the pre frame walls. They provide detail on the plumber's role and sequence in installing the water supply, drainage, and gas systems and fit off of fixtures and fittings. They provide detail on the electrician's role and sequence in installing the electrical wiring, outlets, and fixtures. They demonstrate understanding of finishing trades and how they contribute to the residential building including the co-ordination and order of the tiling installation of floor and wall tiles and the painters finishing process in the same spaces. They identify coordination and inter-dependencies between trades to ensure systems do not interfere and meet the intended requirements of the building plans.

Kairangi | Excellence

The candidate provides a comprehensive description of the key trades involved in the main stages of the construction of a residential building. Each trade has specific responsibilities clearly outlined. The sequence of work for each trade is accurately identified and explained in terms of timing and interdependencies. The candidate shows a thorough understanding of how the different trades contribute to the construction process and includes insights into industry practices.

Indicators for Excellence:

- A comprehensive explanation of the roles of trades involved in residential construction, their roles, sequence of contributions.
- Sequencing includes how trades interact and depend on each other for efficiency and safety.
- Insights into the construction process shows an understanding of industry practices and potential challenges.

For example: The candidate identifies the sequential roles and interdependencies of various trades in residential construction. They detail the builder's initiation of the project, including foundation work, pre-frame walls, and roof trusses. They explain the drainlayer's role in installing drainage systems and ensuring proper sewage and stormwater connections, and the roofer's task of applying roof cladding. The plumber's installation of water supply, gas lines, and drainage, and the electrician's wiring, outlets, and fixtures are clearly outlined. They identify finishing processes such as the gib stopper's preparation of internal walls for painting, including site and dust management. The painter's role includes applying finishes and protecting areas for drying. Flooring installation is described as the final step, demonstrating

correct sequencing. The candidate articulates how each trade's workflow is interdependent, noting how delays can impact the overall schedule.

40550: Place basic concrete as a BCATS project

This skill standard recognises the skills to complete basic concrete work as a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not meet all the requirements for the concrete placement project skill standard. The candidate does not complete or insufficiently meets the project requirements.

Indicators for Not Achieved:

- Incomplete or incorrect material list, leading to insufficient or inappropriate materials.
- Formwork is either not accurately measured and cut or not set up properly.
- Consistency of the concrete is unsuitable for the project.
- Placement of concrete is uneven and fails to meet the required depth, and/or the finish is inconsistent, with environmental factors affecting the curing process.

Paetae | Achieved

The candidate successfully completes concrete work, meeting the basic requirements of a project. Though minor misalignments are identified in the formwork, the concrete is mixed to an adequate consistency, and it is placed evenly with steps taken to protect the concrete from environmental factors during the curing process.

Indicators for Achieved:

- Materials list includes components from the project documentation.
- Formwork is measured, cut, and set up with minor errors in measurement or technique.
- Concrete mixed to a workable consistency for placement.
- Concrete is placed evenly, with minor inconsistencies in depth or finish.
- Curing process includes basic protection from the environment.

For example: The candidate completes a concrete entryway meeting basic project requirements. The materials list identifies workable quantities of key components such as gravel, cement, and water. The formwork is measured and cut working to acceptable tolerances. The formwork set up is functional with minor misalignments. The candidate mixes the concrete to a suitable consistency and is placed in the formwork evenly. The entryway is finished with some small imperfections but is functional, and the curing is managed to prevent premature drying.

Kaiaka | Merit

The candidate efficiently completes the concrete work to meet the project requirements. Correct quantities of materials and specifications are prepared, the formwork is set up correctly preventing inconsistencies, and the concrete placement is consistent and uniform.

Indicators for Merit:

- Formwork is measured and cut accurately with a good setup for easy removal.
- Concrete is mixed to the correct consistency for placement.

- Concrete is placed evenly with consistent depth and finish as a result of effective techniques.
- Curing process is carefully managed to ensure the concrete sets properly.

For example: The candidate completes a concrete base for a table demonstrating an understanding of the project requirements. The formwork is cut and assembled to the correct dimensions, ensuring a stable base for the table. The concrete is mixed to the correct consistency and placed evenly into the formwork. The surface finish is smoothed with a consistent depth across the entire base. The candidate manages the curing process carefully, ensuring the base sets properly without any cracks, ready to support the tabletop. The formwork is removed with ease and without damage after the correct curing time.

Kairangi | Excellence

The candidate demonstrates skilful techniques and precision in completing concrete work. The concrete has precise consistency and is placed to the required depth and finish. The candidate demonstrates an exceptional ability to manage the curing process, ensuring that the concrete is set with no blemishes or imperfections.

Indicators for Excellence:

- Formwork is set up precisely to project requirements and for easy removal.
- Concrete is mixed with accurate consistency for optimal strength and finish.
- Concrete is placed with precision, meeting depth and finish requirements.
- Curing process is managed to ensure flawless results.

For example: The candidate constructs a concrete planter box demonstrating a high standard of finish. The materials preparation includes the exact quantities of formwork, reinforcement and the type of concrete mix needed for durability and ensuring efficient use of materials. The formwork is accurately measured and set up with precision and confirming that the box is square and level. The concrete is mixed to the ideal consistency, placed evenly, and finished through effective techniques resulting in a smooth surface. The curing process is controlled, preventing cracking, and ensuring a solid, durable structure for long-term use in outdoor conditions. The formwork is removed with ease and without damage after the correct curing time.

LEVEL 2 SKILL STANDARDS

40551: Apply controls to maintain a safe BCATS environment

This skill standard recognises the skills to apply controls to maintain a safe building, construction, and allied trades environment.

Kāore i eke | Not Achieved

The candidate does not apply controls to maintain a safe building, construction, and allied trades environment. Hazards are not identified, and appropriate control measures are not followed, leading to unsafe work practices.

Indicators for Not Achieved:

- Hazards in the BCATS environment are not identified.
- Safety controls are not implemented, resulting in unsafe work practices.
- Inability to demonstrate basic techniques for safe use of tools and equipment.
- Failure to maintain a tidy work area or care for tools and equipment when using or storing.
- Use of PPE for dust and noise protection is not demonstrated.

Paetae | Achieved

The candidate successfully applies controls to maintain a safe building, construction, and allied trades environment. The candidate demonstrates an understanding of safety in a BCATS environment and follows established safety controls while undertaking a project. They maintain a tidy work area, and tools are used safely and stored appropriately.

Indicators for Achieved:

- Appropriate controls measures are implemented for hazards identified.
- Established safety controls in the BCATS environment are followed.
- The use of PPE for noise and dust protection is adequately demonstrated.
- Tools, equipment, and machinery are used safely.
- The work area is maintained in a tidy condition, and tools are cared for adequately.

For example: The candidate identifies common hazards in the workshop environment, such as dust from using tools and equipment with wood, and noise from equipment and machinery. They check equipment before use to ensure all required safety guards are in place. The candidate wears personal protective equipment (PPE), such as safety glasses while using hand tools. They ensure the work area is tidy, removing any tripping hazards and safely storing tools after use. The candidate follows established safety procedures, although some minor areas for improvement in safety awareness remain.

Kaiaka | Merit

The candidate demonstrates consistent application of safety controls, demonstrating personal responsibility in a BCATS environment. Hazards are identified, and appropriate control measures are applied and adapted as the project progresses. The candidate uses tools and equipment safely while maintaining a tidy work area, contributing to a safe and productive environment.

Indicators for Merit:

- Hazards in the BCATS environment are identified and managed consistently.
- Safe work practices are applied and are responsive to changes throughout the project.
- Tools, equipment, and machinery are consistently used safely.
- Follow-up procedures are completed to ensure a tidy work area and proper care of tools.

For example: The candidate consistently identifies hazards in the BCATS environment, such as improper tool storage and potential slip hazards from sawdust. They implement appropriate control measures, including using the extraction system and wearing a dust mask over the nose and mouth. The candidate ensures tools are stored securely when not in use. The candidate demonstrates efficient use of tools, following safe operating procedures, such as checking equipment before use and reporting any damaged equipment. They maintain an organised and tidy workspace, demonstrating a high standard of safety and efficiency.

Kairangi | Excellence

The candidate proactively applies controls to maintain a safe building, construction, and allied trades environment. They are pre-emptive in their use of controls, contributing to enhanced safety in the BCATS environment. The candidate demonstrates responsibility in maintaining a safe work area, using tools and equipment safely.

Indicators for Excellence:

- Hazards in the BCATS environment are proactively identified and controlled effectively.
- Safe work practices are demonstrated effectively, contributing to a productive environment.
- Tools and equipment are used safely and effectively, reflecting proactive skills.
- Pre-emptive application of controls results in enhanced safety and a clean, organised and safe work area.

For example: The candidate systematically identifies potential hazards ahead of progressing work, such as checking dust mask filters regularly to ensure that they are not clogging up and changing, as necessary. The candidate reports on equipment maintenance issues, implements control measures, including tool inspections, and demonstrates correct use of tool techniques. The candidate consistently follows safety protocols, effectively using PPE. Their proactive approach contributes to a safe work environment, and they actively encourage peers to follow safety practices.

40552: Use materials for a BCATS project

This skill standard recognises the knowledge and skills to use materials in a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not use materials appropriately in a BCATS project, resulting in a failure to meet project requirements. The candidate does not recognise the properties, storage requirements, and suitability of different materials.

Indicators for Not Achieved:

- Requirements for materials are not identified or are incorrect.
- Properties and storage needs of different materials are not understood.
- Materials are improperly handled or misused, leading to waste or inadequate results.

Paetae | Achieved

The candidate successfully identifies and uses materials to complete a BCATS project. They demonstrate an understanding of the properties and storage requirements for different materials. They use materials safely and for their intended purpose.

Indicators for Achieved:

- Materials are handled and used for their intended purpose, allowing for some waste.
- Properties and storage requirements for different materials used for the project are identified.
- Required materials are correctly identified from project documentation.
- Basic understanding of environmental considerations is evident in material selection.

For example: The candidate successfully identifies the basic requirements for materials used in constructing a Cape Cod chair for it to meet the project requirements. They recognise the use of durable, weather-resistant timber, such as treated pine or macrocarpa, and understand its suitability for outdoor applications. The candidate demonstrates knowledge of the properties of the chosen materials, including their resistance to rot and ability to withstand varying weather conditions. The candidate ensures that materials are stored properly to prevent warping or damage. They apply basic handling techniques with instruction, while assembling the chair, allowing for some minor waste but ensuring that the overall project meets the project specifications.

Kaiaka | Merit

The candidate efficiently uses materials for a BCATS project, minimising waste and handling materials safely. Appropriate materials are identified based on project requirements. They demonstrate an understanding of materials and their properties.

Indicators for Merit:

- Properties and storage requirements of materials are clearly identified and applied with independence.

- Materials are selected appropriately based on project documentation and with consideration to minimising waste.
- Safe handling and efficient use of materials are consistently demonstrated.
- Efficient waste minimisation during the project.

For example: The candidate demonstrates an understanding of materials while constructing a bedside drawer with a cupboard. They select appropriate materials, such as dressed pine for the frame and recycled timber for the cupboard doors, recognising their suitability for indoor furniture. The candidate effectively identifies the properties of the materials, like the strength and ease of use of dressed pine and the environmental considerations of using recycled timber and effectively managing dust. They implement waste-reduction strategies, with thorough planning and ensure precise cuts to minimise excess material. The candidate effectively minimises waste by planning cuts efficiently and using leftover materials for smaller components.

Kairangi | Excellence

The candidate uses materials skilfully for a BCATS project, effectively managing waste and optimising use, safe handling and storage practices. They demonstrate a thorough understanding of their material properties and suitability for use in the BCATS project.

Indicators for Excellence:

- Different materials are examined thoroughly for their suitability in the project.
- Materials are selected with justification, based on their properties and project requirements.
- Waste is minimised to the greatest practical extent.
- Safe handling, effective use, and storage of materials are consistently justified.
- Sustainable practices and environmental considerations are evident.

For example: The candidate demonstrates skill in their use of materials while constructing an exterior table using recycled timber and incorporating a resin insert for both durability and aesthetic appeal. They examine different materials and assess their suitability to project requirements. They show a comprehensive understanding of the properties of recycled timber, emphasising its sustainability and lifecycle. They justify the selection of hardware, considering the suitability to the project. The candidate meticulously prepares the materials, ensuring precise measurements and cuts for a seamless fit with the resin insert. Their choice of materials based on their resistance to outdoor elements and discuss the sustainable sourcing of materials and selection of adhesives. Throughout the project, the candidate maintains safe handling and storage of the materials in the working environment. They effectively manage waste with thorough planning and recycling offcuts.

40553: Use power tools for a BCATS project

This skill standard recognises the skills to select, use, and maintain power tools in a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does use power tools appropriately for a BCATS project, resulting in a failure to meet project requirements. The candidate fails to identify the correct tools and does not apply safe practices or proper techniques for using the tools.

Indicators for Not Achieved:

- Appropriate power tools are not chosen according to project documentation.
- Personal protective equipment is not selected or worn as required.
- Tools are not inspected, set up, or used safely.
- Tools are not maintained, or stored properly, affecting cleanliness and functionality.

Paetae | Achieved

The candidate uses power tools in a BCATS project, selecting tools to meet project requirements and following instructions sufficiently. They maintain tools after use and follow safety practices throughout the project.

Indicators for Achieved:

- Power tools are chosen to meet the requirements from project documentation.
- Personal protective equipment for the use of power tools is selected and worn to meet health and safety controls.
- Tools are inspected, set up and used following manufacturer instructions and directions of the supervisor.
- Suitable techniques of tools are demonstrated to complete project tasks.
- Tools are maintained and stored appropriately to ensure cleanliness and functionality.

For example: The candidate constructs a cupboard, selecting a battery-operated drill and a router based on the project requirements. They wear appropriate personal protective equipment, including safety glasses and hearing protection. The tools are inspected for functionality before use and ensure any maintenance is undertaken before setting them up correctly as per the manufacturer's instructions. The candidate uses the router with a suitable technique to create decorative edges on the wood panels while ensuring the material is clamped securely when using the router. The drill is used to pre-drill screws for assembling the cupboard's frame and attaching the doors. The router and drill are inspected and cleaned after use and safely stored in the appropriate location.

Kaiaka | Merit

The candidate effectively uses power tools, consistently selecting and applying suitable techniques with minimal support. They show personal accountability in their work, ensuring that safety and functionality are prioritised throughout the project.

Indicators for Merit:

- Appropriate power tools are chosen and used responsibly to meet the project's requirements.
- Personal protective equipment for the use of power tools is selected and worn to meet health and safety controls.
- Tools are inspected, set up and used independently adhering to manufacturer instructions.
- Techniques of tools are demonstrated independently to complete project tasks.
- Tools are maintained and stored properly, demonstrating attention to detail in ensuring cleanliness and functionality.

For example: The candidate builds a utility shed using various power tools, including an impact driver, a circular saw, and a nail gun, all selected based on the project specifications. They consistently inspect and set up each tool before use, with awareness of the capabilities and limitations of the equipment. The candidate wears appropriate personal protective equipment throughout the process, such as safety glasses and hearing protection. They pay attention to detail when joining the components, using the impact driver to secure screws for the framing and the circular saw for precise cuts on the panels. They demonstrate independence with effective techniques of tools with minimal support. The candidate ensures that tools are cleaned after use and stored properly, maintaining them in good working condition for future use.

Kairangi | Excellence

The candidate selects and skilfully uses efficient techniques with power tools for a BCATS project. They ensure safety and optimal functionality in the BCATS environment.

Indicators for Excellence:

- Power tools are selected and used with optimal functionality to meet the project requirements.
- Personal protective equipment is used consistently, reflecting a high level of personal accountability.
- Tools are inspected, set up and used efficiently for project requirements.
- Efficient techniques of tools are demonstrated to complete project tasks.
- Tools are maintained and stored meticulously to ensure cleanliness and functionality.

For example: The candidate constructs a wooden fence using a range of power tools, including an impact driver, circular saw, and nail gun. They select tools based on the project requirements, demonstrating a comprehensive understanding of the necessary techniques. The candidate sets up and using each tool, ensuring that the task meets the required project specifications. The candidate uses the circular saw to cut the wooden rails to the correct lengths, ensuring precision with each cut. They demonstrate efficient use of the impact driver to fasten the fence rails to the posts with the correct fixings. The timber palings are secured to the rails using a nail gun, with a skilful technique for fastening while ensuring that the nails are driven straight and spaced evenly. Throughout the project, the candidate consistently wears personal protective equipment, including safety glasses, and ear protection, demonstrating a high level of personal accountability for safety. They inspect and prepare each tool before use, ensuring that the tools are set up and maintained. The candidate ensures that all tools are thoroughly cleaned, inspected, and stored correctly, optimising efficiency for future use.

40554: Use fixed machinery for a BCATS project

This skill standard recognises the skills to use fixed machinery in a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not set up and use the fixed machinery to the required standards, or safety protocols are not followed, and personal protective equipment (PPE) is not used appropriately.

Indicators for Not Achieved:

- Fixed machinery is set up incorrectly or unsafely.
- Machinery usage leads to errors in shaping, joining, or finishing materials.
- Safety protocols, including PPE, are not followed.
- Lack of cleaning and maintaining machinery after use is demonstrated.

Paetae | Achieved

The candidate follows instructions to set up and use the fixed machinery to complete a BCATS project, demonstrating basic competence, including follows safety instructions. There are occasional errors in the setup or operation of the machinery but which do not impact safety. There is some minor oversight in cleaning and clearing the machinery, but the overall safety and functionality are met.

Indicators for Achieved:

- Fixed machinery is set up safely according to instructions with occasional prompting.
- Machinery is used to shape, join, and finish materials to meet the project requirements.
- Safety protocols followed, including PPE usage, is demonstrated.
- Occasional errors in cleaning or clearing the machinery is demonstrated.

For example: The candidate successfully constructs a cupboard with a drawer using fixed machinery such as the table saw for cutting timber and the drill press for making precise holes. The table saw is set up according to instructions, but minor adjustments are needed during cutting, which leads to slight inconsistencies. The drill press is used to create holes for the drawer slides, though some assistance with calculations for required depth is needed. Adequate competence using the lathe is demonstrated to create finished handles for the cupboard. Safety protocols, including ear protection and safety glasses, are followed throughout, and the machinery is cleaned after use, though not thoroughly.

Kaiaka | Merit

The candidate consistently demonstrates a responsible approach to setting up, using, and maintaining fixed machinery, with minimal support. The machinery is operated effectively, and the project met the required specifications.

Indicators for Merit:

- Fixed machinery is set up, used, and maintained responsibly with minimal support.
- Machinery produces materials with good accuracy, meeting project specifications.
- Safety protocols are consistently followed, with PPE usage at all times.
- Fixed machinery is cleaned and cleared after use to an acceptable standard.

For example: The candidate constructs a timber chair through good techniques when using fixed machinery. The machinery setup is correct, with the compound mitre saw used to cut the seat and back slats at precise angles. The saw is initially misaligned, but the candidate adjusts it to ensure accurate cuts. The drill press is used to drill holes for dowel joints for the seat frame. The laser cutter is utilised to create decorative details in the chair back. Support is required in the initial set up of the laser cutter, however the file inputs and finished result reflects a good standard of work. The candidate adheres to safety protocols, including dust masks and ear protection, and ensures the machinery is cleaned effectively after use.

Kairangi | Excellence

The candidate demonstrates precision and skill in the setup, use, and maintenance of the fixed machinery. The machinery is operated independently with a high level of efficiency, and the candidate ensures safety at all stages of the project. The candidate demonstrates skill in the operation and care of the machinery.

Indicators for Excellence:

- Fixed machinery is set up, used, and maintained responsibly with minimal support.
- Machinery produces materials with good accuracy, meeting project specifications.
- Safety protocols are consistently followed, with PPE usage at all times.
- Fixed machinery is cleaned and cleared after use to an acceptable standard.

For example: The candidate constructs a coffee table with a resin insert, demonstrating advanced proficiency with fixed machinery. The CNC router is used independently to carve intricate patterns for the resin insert on the tabletop, ensuring precision. The candidate demonstrates knowledge in safe setup of the table saw to cut the wood to size. The surface planer is utilised to smooth the surfaces before the resin was poured. The candidate demonstrates excellent safety practices, wearing all required PPE, and the machinery is cleaned and maintained to the highest standard.

40555: Measure and calculate to solve problems for a BCATS project

This skill standard recognises the skills to measure and calculate to solve problems in a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not accurately measure and calculate to solve problems for a BCATS project. They are unable to complete numerical calculations, measurement and geometry correctly or use them effectively in the context of the project.

Indicators for Not Achieved:

- Mathematical methods are incorrectly chosen to calculate solutions to problems or are incomplete.
- Mathematical methods, including calculations, measurement and geometry are not applied as required by the project.
- Measurements are not accurate or used correctly in context of the project.
- Measurements are incorrectly interpreted, leading to misalignment or errors in construction.

Paetae | Achieved

The candidate uses appropriate measurements and mathematical methods to solve problems for a BCATS project. The candidate applies the chosen methods and calculations to the project.

Indicators for Achieved:

- Mathematical methods chosen are suitable for calculating solutions to problems.
- Basic measurements and calculations, including simple geometry, are applied to solve problems.
- Measurement results are interpreted correctly and applied in project tasks.
- Simple geometric principles, such as angles or areas, are used appropriately.
- No major errors in calculations or measurements are made.

For example: The candidate constructs a timber fence including a 90-degree corner, applying basic measurements and calculations to meet project requirements. To ensure accurate positioning of fence posts, they set up a string line to mark the fence location. To determine the 90-degree angle, they use an app with distances in the project documentation. They use a tape measure to mark the measurements and setting up the string line accordingly. They measure the required distances between posts and calculate the length of fence rails and palings using basic addition and subtraction. The candidate uses a laser level to ensure that each post is plumb and aligned vertically.

Kaiaka | Merit

The candidate demonstrates effective application of measurement and mathematical methods to solve problems for a BCATS project. Measurement and mathematical methods are used consistently and accurately to determine solutions for meeting project specifications.

Indicators for Merit:

- Mathematical methods are effective and correctly applied to calculate solutions.
- Accurate and detailed measurements are applied to meet project requirements.
- Calculations, including basic trigonometry and geometry, are applied correctly for tasks.
- Geometric methods, such as calculating angles, areas, or perimeters, are used effectively.

For example: The candidate constructs a timber deck, starting by reading and interpreting the working drawings to understand the layout and scale of the project. They use the scale on the drawings to calculate the exact dimensions of the deck and convert these measurements for a cutting list and other materials required. The candidate calculates the amount of timber, screws, and other materials needed, using the area and length of each component. They use standard material prices to calculate the cost of the materials required for the project. To ensure precise alignment of the deck, the candidate applies measurement methods and geometric principles. They calculate the length and width of the deck using basic addition and multiplication to determine the area. The candidate uses trigonometry to calculate the correct angle for the deck's support beams by applying trigonometric functions such as sine or cosine to calculate the angle based on the required length and height of the beams. They also use basic geometry to calculate the perimeter of the deck to ensure the boards fit correctly.

Kairangi | Excellence

The candidate skilfully applies measurement and mathematical methods to solve problems for a BCATS project. They fluently apply advanced strategies with precision and accuracy and accommodate variations in the project.

Indicators for Excellence:

- Mathematical methods reflect sophisticated mathematical reasoning and fluency with calculating solutions to problems.
- Measurements and calculations are applied to solve problems and ensure precision.
- Geometric methods are used with precision to solve problems specific to the project.
- Calculations, measurements and geometry are compared, and justification is made for any variances.

For example: The candidate applies advanced mathematical methods to construct a shed. They interpret the working drawings to understand the layout and scale of the project. The candidate uses the scale on the drawings to convert the dimensions into measurements for the framing, cladding and roofing components, by breaking down the materials into sections. They precisely calculate the total area of the floor and estimate the quantity of materials needed. The candidate then estimates the total cost of the materials based on these measurements, using standard pricing formulas. To ensure accurate alignment and structural integrity, the candidate applies advanced geometric methods. They use trigonometric functions to calculate the correct angles for the roof beams, ensuring that the angles meet at precise intersections. The candidate uses geometry to calculate the perimeter of the shed to ensure that the cladding fits correctly and adjusts for any irregularities in the materials. They document all calculations, methods, and results and clearly justify differences in material quantities and costs of materials.

40556: Create sketches and drawings for a BCATS Project

This skill standard recognises the skills to create sketches and drawings for a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not create sketches and formal drawings to the expected standard. Sketches lack essential details, measurements, and annotations necessary for clear communication of project intentions. Formal drawings do not adhere to standard conventions, or orthographic projections and cross-sections are incomplete or missing.

Indicators for Not Achieved:

- Sketches or drawings are incomplete with minimal orthographic views demonstrated.
- Misalignment or inaccuracies in measurements and proportions, symbols, and abbreviations.
- Limited representation of 3D drawing techniques.
- Formal drawings are not to scale
- Sketches and drawings are difficult to interpret.

Paetae | Achieved

The candidate creates sketches and drawings for a BCATS project. There is evidence of meeting basic project intentions, with the sketches and drawings reflecting a general understanding of technical drawing conventions. While the sketches and drawings are functional, they may show some minor inconsistencies. Sketches and drawings are stored safely to avoid damage.

Indicators for Achieved:

- Sketches: The sketches communicate the project's intent. They include necessary measurements and annotations to guide formal drawing creation.
- Formal Drawings: The formal drawings contain a basic understanding of orthographic projection. The drawings adhere to standard conventions but may lack the precision or detail expected at higher levels, such as line weight consistency or comprehensive annotations on finishing/jointing details.

For example: The candidate creates sketches of a coffee table design to show front and side elevations as well as an isometric view. These sketches include measurements, annotations explaining features (like shelf placements and joint types), and demonstrate a clear understanding of the coffee table's functionality. The sketches show options for different finishes and materials. Their formal drawings include scaled views such as top, front, and side views of a simple structure (e.g., a small shed). The drawings include a cross-sectional view which shows timber and jointing details.

Kaiaka | Merit

The candidate creates effective sketches and drawings for a BCATS project with attention to detail. The information is coherent, and sketches are well-annotated. The formal drawings reflect attention to detail and are created according to standard conventions. There is clear evidence of effective measurement and layout planning, and the drawings are neat, with accurate line work and appropriate use of different orthographic projections and cross-sections**.**

Indicators for Merit:

- Sketches: The candidate creates detailed sketches that clearly communicate the project intentions. These include accurate measurements, well-placed annotations explaining key features.
- Formal Drawings: The formal drawings showcase a high level of clarity and accuracy. They include different orthographic projections with consistent scale, proper use of symbols, and detailed annotations.

For example: The candidate creates sketches for a small utility building that show various angles of the structure, providing a thorough view of its dimensions and features. The annotations and measurements explain key features of door placements and window sizes. Their 3D sketches may include isometric or 2-point perspective of the utility building to accurately communicate the ideas for the project. The candidate's formal drawings for a cabinet may include detailed orthographic projections including cross-sections that highlight construction details. Their scaled drawings demonstrate consistent line weight, necessary symbols (e.g., hinge placements, material details, jointing methods) with clear annotations describing each part of the cabinet.

Kairangi | Excellence

The candidate creates comprehensive sketches and drawings for a BCATS project. The sketches are precise, demonstrating advanced skill in using drawing techniques to communicate detailed project details. All drawings adhere to conventions and are visually refined, with accuracy in measurements, line work, including thorough representations of orthographic projections and cross-sections.

Indicators for Excellence:

- Sketches: The sketches are detailed and precise. They may include multiple perspectives (e.g., isometric and/or oblique views) and are accurately proportioned.
- Formal Drawings: The formal drawings are effectively detailed, showing attention to standard conventions and precision. They include fully annotated drawings with all necessary information, such as structural details and material specifications.

For example: The candidate creates a series of highly detailed sketches of a modern desk design include multiple views: a front elevation, top view, side view, and an isometric drawing. Each sketch is annotated with specific dimensions (e.g., overall height, width, depth, and drawer sizes) and features like cable management solutions, ergonomic considerations, and storage compartments. The candidate specifies details for surface finishes. Their cross-sectional views, and 3D perspective views are sketched and communicate the design for construction. The candidate's formal drawings for an easel design are detailed and adhere to technical drawing conventions. They include fully annotated drawings with all necessary information, such as structural details (e.g., cross-bracing for stability), notes on adjustability

mechanisms, and materials specified. The candidate presents a complete set suitable for construction, including detailed sections and isometric views that effectively communicate the easel's design and functionality, along with any relevant construction considerations.

40557: Interpret and use trade information to progress a BCATS project

This skill standard recognises the skills to interpret and use trade information to progress a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not satisfactorily interpret and use trade information in the documentation provided to progress tasks for a BCATS project. They struggle to receive, understand, and respond to written or spoken information related to the project requirements leading to misunderstandings or lack of progress.

Indicators for Not Achieved:

- Trade information in the documentation provided is not understood or applied to inform progression of project tasks.
- Feedback is not applied to improve project outcomes.
- Communication with others does not meet the needs of the project or contribute to task completion.
- Available information is not accessed or used for the project.

Paetae | Achieved

The candidate responds to trade information to progress project requirements in a BCATS environment. They interpret information and identify requirements for project tasks from documentation. The candidate confirms understanding of instructions or prompts. They respond to feedback to improve project tasks.

Indicators for Achieved:

- Interpret documentation to Identifies basic requirements for the project.
- Communication is clear and appropriate to progress the project.
- Feedback is received and used to adjust the approach to tasks and improve outcomes.
- Communication with others reflects consideration for the audience and the project's needs.

For example: The candidate receives project-related instructions for constructing a fence and confirms their understanding by asking relevant questions and documenting required information. They respond to information related to the safety requirements specific to the BCAT environment are applied to ensure safety requirements are met. The candidate actively contributes to decision-making to ensure quality control procedures are carried out, so the fence meets design and structural requirements, referring to documentation when required. Feedback from the trainer is received and used to make necessary adjustments to improve outcomes to tasks.

Kaiaka | Merit

The candidate demonstrates consistently interprets and applies trade information to advance the project. They analyse documentation and demonstrate independence is seeking solutions and documenting decisions and project requirements. Feedback is sought, received, and used to improve the project. The candidate consistently contributes to advancing the project.

Indicators for Merit:

- Documentation is analysed and interpreted to identify all requirements for the project.
- Communication is consistent and clear to advance the project.
- Feedback is used effectively to make necessary improvements and meet project requirements.
- Information is shared clearly and in a timely manner, ensuring all parties are aligned with their responsibilities.

For example: The candidate demonstrates clear and consistent understanding of trade information throughout the construction of a utility shed. They demonstrate independence by analysing the construction plans and planning out requirements for the project. They ensure communication methods are adjusted with team members to reflect their needs in understanding project requirements. The candidate actively seeks feedback on techniques and materials identified for the structure of the shed, using it to refine the project and ensure it meets project requirements. They communicate quality control procedures clearly and promptly to ensure tasks are completed efficiently and to the standard required. Feedback is received and understood in context, and adjustments are made to improve the quality of the work, such as refining cuts for the exterior cladding to improve working tolerances.

Kairangi | Excellence

The candidate proactively interprets a range of trade information to effectively guide and progress the project. They effectively analyse documentation on requirements for the project. They use communication methods and feedback proactively to drive improvements, maintain safety in the BCATS environment, and ensure the project meets the required standards of quality.

Indicators for Excellence:

- Documentation is effectively analysed throughout the project to ensure project requirements are met.
- Communication is clear, proactive, and used to guide the project's progress and workplace safety.
- Feedback is used proactively to address issues and make improvements, ensuring project requirements are met.

For example: The candidate effectively analyse documentation on requirements for the retaining wall and ensure all materials and construction methods are considered. They communicate with all relevant parties during the construction of the retaining wall, ensuring alignment with the project's requirements. They refer to documentation throughout the project to ensure alignment with project requirements. They proactively discuss potential challenges with the team, such as environmental considerations, and task allocation of construction tasks and suggest solutions to keep the project on track. Feedback from the

supervisor and team is actively incorporated to refine the efficiency of time and materials of the retaining wall construction.

40558: Plan and monitor the completion of a BCATS project

This skill standard recognises the skills to plan and monitor the process of completing a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not plan and monitor the process of completing a BCATS project to the required standard. There are gaps in understanding of the tasks and processes needed to meet the project requirements and progress is not effectively tracked.

Indicators for Not Achieved:

- Tasks and processes are not identified to meet the project requirements.
- Materials, equipment, and machinery required to construct the project are not identified
- Tasks and project stages are not planned or tracked effectively.
- Quality control procedures are not applied, leading to poor quality or failure to meet requirements.
- No adjustments to address problems or delays are made when deviations from the plan occur.

Paetae | Achieved

The candidate demonstrates the ability to plan and monitor the process of completing a BCATS project. Tasks are planned and materials, equipment and machinery are identified according to project requirements. They track the progress and quality of the various processes, ensuring tasks are completed as required.

Indicators for Achieved:

- Materials, equipment, and machinery required to construct the project are identified
- The project is monitored and tracked against the planned schedule and requirements.
- Basic quality control is applied, considering both project requirements and environmental impact.
- Project documentation is in good condition and is accessed to progress the project.
- Completed project is compared to documentation, with findings presented clearly.

For example: The candidate plans and monitors the construction of the step ladder, following the tasks outlined in the BCATS project documentation. Materials, such as timber and screws, are identified based on the project requirements, and necessary equipment, like saws and drills, are prepared in advance. Project documentation is kept safe and is referenced throughout the project. Quality control procedures are applied, ensuring secure joints and stability. The candidate also considers environmental impact by using sustainable materials, developing an effective cutting list and minimising waste. The candidate compares the

finished ladder to the project documentation, confirming that dimensions and meet the required standards. The findings are presented clearly.

Kaiaka | Merit

The candidate efficiently plans and monitors the process of completing a BCATS project. They demonstrate independence in how tasks are planned and undertaken in sequence. The candidate applies quality control procedures considering environmental impact and systematic organisation, storage and updates to project documentation. They evaluate the plan and outcomes to inform insights for future projects.

Indicators for Merit:

- Materials, equipment, and machinery are correctly identified for use.
- Tasks are independently planned and undertaken according to the project documentation.
- Quality control is applied, considering both project requirements and environmental impact.
- Project documentation is managed well for easy reference.
- Project plan, monitoring, and evaluation are documented, providing insights for future decisions.

For example: The candidate plans and monitors the process for the construction of a workbench, following the BCATS project documentation. Materials such as plywood, pine framing timber, and screws are identified, with necessary tools like a table saw, drill press, and clamps being prepared for use. Tasks, such as cutting, assembling, and finishing, are planned in a logical sequence and completed independently according to project specifications. The project documentation is carefully managed, ensuring it is kept safe and easily accessible throughout the project. Quality control measures include checking for square corners, ensuring level surfaces, and verifying that all joints are tight and stable. Sustainable materials are chosen, and waste is minimised by planning efficient cuts. The project's progress is tracked, and when adjustments are needed, such as reinforcing a joint, the candidate implements these changes promptly. The candidate compares the workbench with the project documentation, assessing whether dimensions and functionality align with the requirements. Insights gathered from monitoring and evaluation are documented to inform future decisions and improve processes in future projects.

Kairangi | Excellence

The candidate effectively plans and monitors the process of a BCATS project. Planning is optimised, ensuring task progression, safe practice, ensuring the final product meets the specified standards. Project evaluation is comprehensive, integrates environmental sustainability, and supports the development of trade skills.

Indicators for Excellence:

- Detailed planning ensures tasks are completed on time, with monitoring to optimise project specifications.
- Materials, tools, and machinery are efficiently identified and utilised throughout the project.

- Project documentation is maintained and updated for easy reference, reflecting adjustments as needed.
- Quality control is applied, optimising project tasks and project quality.
- Environmental considerations, such as minimising waste and using sustainable materials, are integrated into the process.
- The project is evaluated against the original documentation, clearly demonstrating optimisation of project outcomes, improvements for future projects.

For example: The candidate's garden shed project plan is detailed, with clear tasks and timelines based on the project documentation. Materials are comprehensively identified, and necessary equipment and machinery are correctly identified. Project documentation is carefully managed, updated regularly, and kept easily accessible. Any deviations from the plan, such as a change in design specifications, are identified and addressed promptly, ensuring the project schedule is maintained and project outcomes are optimised. Quality control procedures are applied at every stage of construction with attention to detail in ensuring level surfaces, secure joints, and overall stability. Sustainable materials are chosen, and waste is minimised. The candidate ensures all work complies with environmental considerations, using eco-friendly paint and recycling excess materials. The candidate compares the finished garden shed to the project documentation, providing a thorough analysis of how the project outcomes were optimised ensuring the final product aligns with the initial brief and specifications and key learnings that can improve processes for future projects.

40559: Identify employment opportunities in BCATS industries

This skill standard recognises knowledge of employment opportunities in building, construction, and allied trades industries in Aotearoa New Zealand.

Kāore i eke | Not Achieved

The candidate does not identify employment opportunities within BCATS industries. The scope of work, roles, and responsibilities are not clearly identified, and the descriptions of skills, training opportunities, and potential employment paths are either incomplete or inaccurate.

Indicators for Not Achieved:

- Scope of work, roles, and responsibilities are not identified or are incorrect.
- Valuable skills, training opportunities, and employment paths are mentioned but lack detail or accuracy.
- Description of potential clients and relationships within the industry is incomplete or missing.
- Key industry trends and career paths are not discussed or are misrepresented.

Paetae | Achieved

The candidate successfully recognises employment opportunities within selected BCATS industries. The scope of work, roles, and responsibilities are identified, and valuable skills and training opportunities are described. The potential clients and nature of relationships within the industry are described. A summary of training and employment opportunities is identified.

Indicators for Achieved:

- Scope of work, roles, and responsibilities are identified.
- Valuable skills, training opportunities, and employment paths are described in general terms.
- Potential clients and relationships within the industry are explained at a basic level.
- Summary of employment opportunities is provided, covering the main career paths and industries.

For example: The candidate identifies carpentry, concrete construction, and painting as a career within the building industry, outlining the scope of work for each trade listed with a basic understanding of the work involved, their role in the construction process and legal responsibilities associated with each trade. Training opportunities, such as apprenticeships and trade qualifications, are correctly identified. Potential clients are described, including homeowners, property developers, and builders, with a focus on residential construction. The candidate provides a basic summary of employment opportunities, noting that the identified trades typically work in teams under supervision and may be employed by construction companies or as self-employed contractors.

Kaiaka | Merit

The candidate provides a clear summary of employment opportunities within selected BCATS industries, including a self-evaluation of suitability. The description of roles and responsibilities

is detailed, and the candidate demonstrates a clear understanding of how skills and training opportunities relate to employment paths. The description of potential clients and relationships is detailed, with consideration of how these relationships function within the industry.

Indicators for Merit:

- Roles and responsibilities are clearly identified, with detailed descriptions of the scope of work.
- Skills, training opportunities, and employment paths are explained in detail, linking them to the candidate's understanding.
- Clients and relationships within the industry are evaluated with consideration of the candidate's awareness of industry needs.
- Self-evaluation of suitability includes personal strengths and areas for development.

For example: The candidate identifies glazier, brick and block laying, and floor and wall tiling as careers within the building industry, outlining the scope of work for each trade with a detailed understanding of the tasks involved. They describe each trade's role in the construction process and the legal responsibilities associated with each including council requirements and associations supporting each industry trade. Training opportunities, including apprenticeships and trade qualifications, are clearly identified for each trade providing detailed options. Potential clients such as homeowners, builders, and property developers are described in detail, with an understanding of the importance of strong working relationships in the construction process. The candidate explains the employment opportunities available within each trade, noting that these trades often work in teams or as part of subcontracting arrangements under supervision, and may work for construction companies or as self-employed contractors. The candidate also completes a self-evaluation of suitability for each of the roles described, highlighting strengths and areas for personal development.

Kairangi | Excellence

The candidate conducts a comprehensive evaluation of training and employment opportunities within BCATS industries, providing detailed and thoughtful insights. The description of roles, responsibilities, and skills required is thorough, and the potential clients and relationships within the industry are explored in-depth. The self-evaluation of suitability is insightful, reflecting on personal aspirations and how they align with industry requirements.

Indicators for Excellence:

- Comprehensive evaluation of roles, responsibilities, and scope of work within BCATS industries is provided.
- Skills, training opportunities, and employment paths are linked with personal interests and industry needs.
- Clients and industry relationships are explored in-depth.
- Self-evaluation of suitability is thoughtful, identifying strengths, challenges, and how they align with career goals.

For example: The candidate provides a comprehensive evaluation of quantity surveying, project management, and concreting as careers within the BCATS industry, offering a thorough explanation of the scope of work for each industry specialist. They detail the specific tasks involved, the specialist's role in the overall BCATS process, and the legal and regulatory

responsibilities that each specialist must adhere to. The candidate identifies and discusses the relevant training opportunities, certifications, and required qualifications for each career. Potential clients are described in-depth, including homeowners, commercial property developers, councils, and general contractors. The candidate demonstrates a clear understanding of the dynamic relationships and communication necessary to succeed in the industry. The candidate provides a comprehensive summary of employment opportunities within each industry, noting the variety of work settings, from large-scale projects with construction firms to small-scale projects as a self-employed contractor. They reflect on how industry specialists often work collaboratively in teams, sometimes under supervision, and discuss how job roles can evolve within the industry. A detailed self-evaluation of suitability for these industry options is provided, identifying strengths and areas for development, along with how personal interests align with specific career paths in the BCATS industries.

40560: Construct timber furniture as a BCATS project

This skill standard recognises the skills to construct timber furniture as a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not construct functional timber furniture. The material preparation or assembly process is incomplete, and components are not fixed securely. The finished timber furniture is inadequate.

Indicators for Not Achieved:

- Materials and cutting lists are incomplete or poorly calculated.
- Cuts are inaccurate, leading to misaligned components that do not function.
- Fixing methods are incorrect and fail to secure furniture components.
- Incorrect tools and equipment are used to construct the furniture project.
- Furniture surfaces are unresolved such as visible rough edges or inadequate finishing suitable for the project.

Paetae | Achieved

The candidate successfully constructs functional timber furniture that meets project requirements. The materials and cutting list are prepared with most components identified and calculated correctly. The construction process shows an understanding of basic techniques, resulting in a timber furniture that is functional, though minor inconsistencies may be present in alignment, jointing or surface finish.

Indicators for Achieved:

- Materials and cutting lists include components but may lack detail in measurements or materials.
- Components are marked out and cut with minor inconsistencies that do not affect overall functionality.
- Assembly reflects appropriate fixing methods with some minor inaccuracies such as misalignment.
- Finishing process is basic, resulting in functional surfaces suitable for the project.

For example: The candidate constructs a functional outdoor chair that meets basic project requirements. The materials and cutting list identify the necessary components, such as legs, seat slats, and backrest. The chair is assembled using appropriate screws and brackets, though there are minor inconsistencies in the alignment of the slats. The finish is satisfactory, with surfaces sanded, leaving some rough edges, but lacks an appropriate protective coating suitable for the environment.

Kaiaka | Merit

The candidate constructs timber furniture efficiently, for a quality finish. The materials and cutting list are well-prepared, and components are cut accurately according to the project documentation. Components are fixed securely using methods suitable for the project. The

finished furniture exhibits attention to detail, suitable to the project's intended environment.

Indicators for Merit:

- Materials and cutting lists are detailed and accurately prepared.
- Efficient cutting techniques result in smooth edges.
- Assembly of furniture demonstrates effective use of fixing methods with a focus on securing components.
- Finishing process is executed well, with high quality surfaces suitable to the project's intended environment.
- Tools and equipment are used efficiently and safely to construct the furniture project.

For example: The candidate constructs a coffee table with a well-functioning drawer, demonstrating clear attention to detail. The materials and cutting list are thorough, and all components are cut accurately according to project documentation. The assembly demonstrates effective use of joinery techniques, resulting in a solid construction with a smooth drawer operation. The surface of the coffee table is finished with a stain and protective coat suitable to the project's intended environment.

Kairangi | Excellence

The candidate constructs timber furniture with precision for a high standard finish. The preparation work is thorough, with all tools used effectively and safely. The assembly process reflects thorough quality checks, ensuring all components are securely fixed. The furniture is finished to a high standard, with surfaces suitable to the project's intended environment, well-executed fixings, and flawless application of finishes.

Indicators for Excellence:

- Components are cut with precision, contributing to a seamless assembly.
- Component preparation demonstrates efficient use of materials.
- Assembly reflects advanced techniques with quality checks ensuring durability and reliability.
- Finishing processes are thorough, resulting in high-quality surfaces with no visible imperfections.
- Tools and equipment are used efficiently and safely to construct the furniture project.

For example: The candidate constructs a student desk that demonstrates high-quality craftsmanship and a visually aesthetic project. The materials and cutting list are detailed, specifying all components, including ergonomic features like rounded edges and cable management solutions. The preparation work reflects advanced techniques, with accurate cutting, precise joinery, and thorough checking of all measurements. The assembly reflects attention to detail, with secure joints and a high standard of finish. The assembly process reflects thorough quality checks, and the finished furniture demonstrates a high standard of quality. The desk's surface is sanded smooth, and multiple coats of a durable finish are applied, resulting in both functional and visually appealing furniture suitable to the project's intended environment.

40561: Complete concrete work as a BCATS project

This skill standard recognises the skills to complete concrete work as a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not complete concrete work to meet project requirements. The preparation work or concrete placement is unsuitable. The finished concrete work does not meet the required shape, strength, or surface finish.

Indicators for Not Achieved:

- Materials list is incomplete or poorly calculated.
- Inadequate preparation of formwork leading to issues in placement.
- Inadequate amount or compacting of hardfill.
- Techniques for mixing, laying or finishing concrete are incorrect.
- Finished work exhibits visible failures in strength and surface quality.

Paetae | Achieved

The candidate successfully completes concrete work that meets project requirements. The materials list is prepared with components identified and calculated correctly. The preparation is sufficient for laying concrete, and the finished work is functional, though there may be minor inconsistencies in the surface finish or shape.

Indicators for Achieved:

- Materials list includes most necessary components but may lack detail in quantities or specifications.
- Preparation demonstrates basic understanding of ground leveling and formwork setup is adequately level.
- An adequate amount of hardfill is placed and compacted sufficiently with minor disturbances to formwork.
- Concrete is mixed to an adequate consistency to ensure the concrete is functional.
- Concrete work is placed and finished, showing minor inconsistencies in surface quality.

For example: The candidate completes a concrete pathway that meets basic project requirements. The materials list identifies the necessary components, such as gravel for the base, concrete mix, and reinforcement materials. The preparation involves excavating the ground and setting up formwork, although some areas may not be leveled perfectly. The formwork is placed with an adequate amount of hardfill and compacted without formwork being affected too much. The concrete is mixed according to specifications and poured into the formwork. The finished pathway has minor surface imperfections, such as minor cracks and inconsistencies in an intended smooth finish, but it is functional and serves its purpose.

Kaiaka | Merit

The candidate completes the concrete work efficiently for a quality finish. The materials list is well-prepared, and all components of formwork, hardfill and concrete calculated accurately. Preparation work demonstrates efficient practice, ensuring the concrete is mixed, placed, and finished correctly. The finished concrete exhibits attention to detail, aligning closely with the project's intended requirements.

Indicators for Merit:

- Materials list is detailed and accurately prepared.
- Preparation work demonstrates efficient use of techniques, such as proper leveling of formwork that is also sturdy.
- Hardfill is placed and compacted efficiently without disturbances to formwork.
- Concrete is mixed to the correct ingredient ratios to the correct consistency.
- Concrete is placed effectively, resulting in a consistent surface finish.

For example: The candidate demonstrates efficient techniques in completing a concrete slab for an outdoor patio. The materials list is detailed, including details on the concrete mix and reinforcement. The preparation involves careful excavation, leveling the area, and setting up formwork securely. Hardfill is used efficiently within the formwork and is compacted effectively. The concrete is mixed accurately and poured into the formwork, resulting in a smooth, even surface finish with good curing practices applied to ensure no visible cracking. The finished patio slab exhibits attention to detail and meets project requirements.

Kairangi | Excellence

The candidate skilfully completes the concrete work, with precision for a high standard finish and attention to quality checks throughout the project. The materials list is comprehensively prepared, covering all necessary components and specifications. Preparation work is thorough, ensuring optimal conditions for concrete placement. The finished concrete showcases a high standard of craftsmanship, with accurate dimensions, shape and finish.

Indicators for Excellence:

- Techniques for excavation, formwork, and site readiness are undertaken with skill and precise attention to project requirements.
- Concrete is mixed and placed with precision, achieving the desired shape and strength.
- The surface finish is consistent, demonstrating high-quality craftsmanship.
- Quality checks are consistent throughout the project documentation.

For example: The candidate constructs a set of concrete steps leading to a patio area, demonstrating precision and attention to detail. The preparation involves careful excavation and precise formwork setup. The formwork is strong, sturdy and level which ensures uniform height and angle for each step. The concrete is mixed to the correct consistency for the required aggregate chosen. The concrete is poured with efficiency, achieving a smooth, durable surface finish with minimal waste. The finished steps exhibit accurate dimensions and visual appeal, enhanced by the high standard of finish.

40562: Construct a timber deck as a BCATS project

This skill standard recognises the skills to construct a spaced residential timber deck as a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not construct a timber deck, resulting in a failure to meet project documentation. The material preparation or assembly process is incomplete, and components are not fixed securely. The finished deck does not meet the project documentation, resulting in a lack of functionality.

Indicators for Not Achieved:

- Materials and cutting list are incomplete or poorly calculated.
- Inadequate excavation or misalignment of pile positions.
- Poorly measured decking materials resulting in unsafe gaps and misalignment of materials.
- Incorrect fixing methods resulting in a weak or unstable structure.
- Finished deck exhibits visible failures in quality, such as uneven surfaces or rough edges.

Paetae | Achieved

The candidate successfully constructs a functional timber deck that meets project documentation. The materials and cutting list were prepared with most components identified and calculated correctly according to the project documentation. Basic techniques were used in the construction process, resulting in a deck that is functional, though minor inconsistencies may be present in the surface finish or alignment.

Indicators for Achieved:

- Materials and cutting list include components but may lack detail in quantities or specifications.
- Pile positions are set out, marked, and excavated.
- Piles are placed with minor discrepancies in alignment.
- Bearers and joists are cut and fixed appropriately using the correct techniques.
- Decking material is cut and fixed appropriately but may show some unevenness.
- Finished deck demonstrates minor inconsistencies in surface quality.

For example: The candidate constructs a simple timber deck for a small outdoor space, meeting project documentation. The materials and cutting list identify essential components such as H3 treated timber for the bearers, joists, and decking boards, along with H5 timber for the piles. The candidate sets up a safe worksite and can demonstrate safe use of tools for the project. The candidate marks the pile positions and excavates the holes, though some holes may be slightly misaligned. The bearers and joists are cut and attached securely, but the decking boards show minor gaps and uneven edges. The finished deck is functional and suitable with minor surface imperfections.

Kaiaka | Merit

The candidate efficiently constructs the timber deck for a quality finish. The construction process demonstrates consistent practice, including effective use of tools while following safety protocols. The site is excavated and piles for the deck are constructed accurately, meeting design specifications. Final treatment of the decking surface demonstrates a quality finish appropriate to the project documentation.

Indicators for Merit:

- Materials and cutting list are detailed and accurately prepared.
- Excavation and pile placement demonstrate effective techniques.
- Bearers and joists are cut and fixed with techniques that result in a stable structure.
- Deck surface exhibits attention to detail, with smooth surfaces and properly aligned components.

For example: The candidate constructs a timber deck, demonstrating efficient techniques and a quality finish. The materials list is detailed, and incorporates all necessary components, including identification of appropriate treated timber, galvanised U nails and 100mm screws for fixing. The candidate consistently sets up a safe worksite and can demonstrate safe use of tools throughout the project. The preparation work involves correct measurement, profiles, leveling and careful excavation for pile placement, ensuring a stable foundation. The bearers, joists and decking boards are cut accurately and fixed properly, resulting in a level surface. The finished deck demonstrates a quality appearance, with minimal gaps and an even finish.

Kairangi | Excellence

The candidate skilfully constructs the timber deck with precision for a high standard finish and attention to quality checks throughout the project. The preparation work is thorough, with all tools used effectively and safely. Construction includes precise excavation, secure pile placement, and fitting of bearers, joists and decking surface. The finished deck is well executed with smooth surfaces and accurate dimensions achieving a durable structure.

Indicators for Excellence:

- Preparation work reflects advanced techniques for excavation and accurate pile placement.
- Bearers and joists are measured, cut, and fixed precisely demonstrating correct techniques.
- Decking surface is measured, cut, and fixed with precision, achieving a durable structure.
- Finished deck is to a high standard of finish with a smooth, durable structure and accurate dimensions.
- Quality checks are documented throughout the project and reflect improvements in project tasks.

For example: The candidate constructs an extended timber deck for outdoor use, demonstrating high-quality craftsmanship and attention to detail. The materials list is comprehensive including identification and quantities of appropriate treated timber, fixing, and finishing materials. The preparation work includes correct measurements, profiles, leveling and accurate excavation and pile placement, ensuring the deck is stable and secure. The bearers, joists and decking surface are cut and fixed with precision, and the finished deck has a smooth surface with no visible gaps. Quality checks are documented throughout the project and reflect improvements in construction. The finished deck demonstrates a high

standard of finish with durable and stable material construction with a flawless finish using the appropriate outdoor decking oil.

40563: Construct a utility building as a BCATS project

This skill standard recognises the skills to construct a non-consent timber framed utility building as a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not construct a functional non-consent timber-framed utility building. The material preparation and construction process lacks appropriate techniques. The finished building does not meet the required assembly of components resulting in a lack of functionality.

Indicators for Not Achieved:

- Materials and cutting list are incomplete or poorly calculated.
- Inadequate assembly of framing results in instability.
- Poorly fixed exterior wall and roof cladding leading to gaps or misalignment that affect weather tightness.
- Finished building exhibits visible failures in functionality and finish.

Paetae | Achieved

The candidate successfully constructs a functional non-consent timber-framed utility building. The materials and cutting list are prepared with most components identified and calculated correctly. The construction process demonstrates basic techniques, resulting in a building that is functional, though minor inconsistencies may be present in the finish or alignment.

Indicators for Achieved:

- Materials and cutting list include components but may lack detail in quantities or specifications.
- Components of the utility building are set out, marked, and assembled correctly.
- Framing is erected and secured appropriately with minor discrepancies in alignment.
- Exterior wall and roof cladding are fixed appropriately but may show minor unevenness.
- Finished building demonstrates minor inconsistencies in weather tightness and finish.

For example: The candidate constructs a simple timber storage shed. The materials and cutting list identify treated timber framing, marine grade plywood exterior cladding, and corrugated roofing material. The candidate prepares the site, leveling the ground, ensuring a stable base for the shed. The joists and subfloor are constructed appropriately using treated timber, providing a solid foundation. The framing is erected correctly, but the exterior cladding shows minor gaps and uneven edges. The finished shed is functional, demonstrating an acceptable level of weather tightness with meeting project documentation.

Kaiaka | Merit

The candidate efficiently constructs the utility building, resulting in a quality finish. The materials and cutting list are well-prepared. The building framing and exterior cladding components cut accurately and fixed securely according to project documentation. The finish

of the utility building reflects efficiency, with well-aligned components to ensure weather tightness, and a quality surface finish.

Indicators for Merit:

- Materials and cutting list are detailed and accurately prepared.
- Preparation and assembly of components demonstrate effective techniques.
- Framing is measured, cut, and fixed efficiently, resulting in a stable structure.
- Wall and roof cladding is measured, cut, and fixed efficiently resulting in a weather tight building.
- Finished building exhibits attention to detail with smooth surfaces and properly aligned components.

For example: The candidate constructs a garden tool shed, demonstrating efficient techniques and a quality finish. The materials and cutting list incorporates all necessary components such as H2 treated timber framing, shiplap weatherboard cladding, screws, and roofing material. The preparation work involves careful site preparation, marking, leveling the ground, and accurate placement of a stable base for the shed. The framing is measured, cut and assembled accurately, resulting in a stable structure. The exterior weatherboard cladding and roofing material is fixed with the correct technique. The building is finished demonstrating a high-quality surface and weathertightness demonstrating durability and the ability for the materials to deflect and drain water and dry.

Kairangi | Excellence

The candidate skilfully constructs a durable and high-quality utility building, demonstrating precision and attention to quality checks throughout the project. The preparation work and construction is accurate, achieving a stable and durable structure. The finished building demonstrates a high standard of quality, ensuring complete weather tightness.

Indicators for Excellence:

- Preparation reflects advanced techniques for site readiness and component set out and assembly.
- Framing and cladding are measured, cut, and fixed with precision, achieving a durable structure.
- Finished building demonstrates a high standard of finish, with no visible gaps or uneven surfaces.
- Quality checks throughout the project reflect improvements in project tasks.

For example: The candidate constructs an outdoor utility building that serves as a versatile space for storage or equipment. The materials and cutting lists are comprehensive, detailing all components, including the correctly identified treated timber and appropriate fixings for framing and exterior wall and roof cladding. The candidate exemplifies a safe worksite and can demonstrate safe use of tools throughout the project. The preparation work reflects advanced techniques, with accurate site preparation ensuring the building's stability. The framing and cladding are cut and fitted with high precision, resulting in a durable structure. Quality checks are documented throughout the project and reflect improvements in construction. The building exhibits excellent weather tightness, demonstrating durability and the ability for the materials to deflect and drain water and dry. A high standard of finish is demonstrated with durable material construction, finished using the appropriate exterior paint finish to smooth cladding.

40564: Lay pavers as a BCATS project

This skill standard recognises the skills to lay paving as a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not lay functional paving area. The materials list is incomplete or incorrect, leading to inappropriate or insufficient materials for the project. The construction process lacked appropriate techniques, and the finished paved area does not meet the required dimensions or stability.

Indicators for Not Achieved:

- Materials list is incomplete or poorly calculated.
- Excavation and preparation of base course and sand is inadequate.
- Paved area is misaligned.
- Pavers are poorly laid resulting in uneven surfaces or uneven gaps.
- Finished area exhibits visible failures in functionality and finish.

Paetae | Achieved

The candidate successfully lays a functional paved area that meets basic project documentation. The materials list is prepared with most components identified and calculated correctly. The site preparation and construct in a paved area that is functional and level across both planes, though minor inconsistencies may be present in alignment or surface level finish.

Indicators for Achieved:

- Materials list includes components but may lack detail in quantities or specifications.
- Area to be paved is excavated and leveled adequately.
- Preparation including base course and sand is sufficiently compacted.
- Pavers are laid with minor discrepancies in alignment.
- Paved area is level across both planes.

For example: The candidate constructs a simple paved walkway that meets project documentation. The paved area is level across both planes, includes right angles, uses pavers no larger than 600 × 600 mm, and is at least 2 m² in size or contains a minimum of 100 pavers if smaller. The materials list identifies essential components, such as concrete paving blocks, GAP 20 base course, GAP 7 base course, jointing sand and mortar. The candidate prepares the site by excavating the area and leveling the ground, though some areas may not be perfectly even. The base course layers are to an acceptable depth and are prepared and compacted appropriately. The paving blocks are laid with some misalignment in gaps. The walkway is finished with jointing sand and is haunched on the edges using mortar. The paving is functional, providing a clear path with minor surface level imperfections.

Kaiaka | Merit

The candidate lays paving efficiently for a quality finish. The materials are well-prepared, and construction process demonstrates effective use of tools. The site preparation is accurate, meeting design specifications. The paved area is functional, with blocks laid accurately aligned and fixed securely using the correct materials and processes.

Indicators for Merit:

- Materials list is detailed and accurately prepared.
- Preparation of base course and sand demonstrates efficient techniques and quantities.
- Pavers are laid with good alignment, resulting in a stable surface.
- Finished area exhibits attention to detail with level surfaces and properly aligned blocks.

For example: The candidate constructs a garden patio using paving blocks, demonstrating efficient techniques and attention to detail. The paved area is level across both planes, includes right angles, uses pavers no larger than 600 × 600 mm, and is at least 2 m² in size or contains a minimum of 100 pavers if smaller. The materials list is details all necessary components such as durable concrete paving blocks, GAP 20 base course, GAP 7 base course, jointing sand and framing timber. The preparation work involves careful excavation and leveling of the area, ensuring a stable foundation. Framing timber is constructed and efficiently contains the compacted, and level base course layers to the correct depth. The paving blocks are laid with good alignment and even gaps, resulting in a sturdy surface. The patio is finished with jointing sand with smooth edges and proper drainage.

Kairangi | Excellence

The candidate skilfully lays paving, with precision for a high standard of finish. The materials and site are prepared thoroughly, ensuring optimal conditions for paving. Paving is laid accurately, achieving a stable and durable surface and the finished area demonstrates a high standard of quality.

Indicators for Excellence:

- Materials list is comprehensive, covering all aspects of preparation, construction, and finish.
- Preparation of base course and sand demonstrates precise techniques and quantities.
- Pavers are measured and laid with precision, achieving a stable surface.
- Finished area demonstrates a high standard of finish, with even gaps and level surfaces.
- Quality checks are undertaken throughout the project, reflecting improvements in project tasks.

For example: The candidate constructs a carport area using paving blocks with precision. The paved area is level across both planes, includes right angles, uses pavers no larger than 600 × 600 mm, and is at least 2 m² in size or contains a minimum of 100 pavers if smaller. The materials list is comprehensively prepared, detailing all components, including framing timber, paving blocks, correct quantities of base course and finishing materials. The preparation work reflects advanced techniques, with accurate excavation and compaction of the base course, ensuring the area level and suitable for paving. The paving blocks are laid with precision, achieving a level surface. Quality checks are documented throughout the project and reflect improvements in construction. The finished driveway has even gaps and a level durable surface, reflecting a high standard of craftsmanship.

40565: Construct a retaining wall as a BCATS project

This skill standard recognises the skills to construct a retaining wall as a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not construct a functional retaining wall that meets project documentation. The material preparation or assembly process is incomplete, and components are not fixed securely. The finished retaining wall does not meet the dimension, stability or quality expectations.

Indicators for Not Achieved:

- Materials and cutting lists are incomplete or poorly calculated.
- Preparation of drainage is inadequate.
- Installation of the posts or foundations is inadequate, resulting in instability.
- Components are assembled poorly leading to misalignment.
- Finished wall exhibits visible failures in functionality and finish.

Paetae | Achieved

The candidate successfully constructs a functional retaining wall that meets project documentation. The materials and cutting lists are prepared with most components identified and calculated correctly. The construction process shows basic techniques, resulting in a retaining wall that is functional, though minor inconsistencies may be present in alignment or surface finish.

Indicators for Achieved:

- Materials and cutting lists include components but may lack detail in quantities or specifications.
- Foundation for the retaining wall is prepared adequately.
- Wall components are constructed with minor discrepancies in alignment.
- Finished wall demonstrates minor inconsistencies in surface quality.
- Retaining wall meets size requirements of 350 mm–1 m high with a minimum 2.4 m perimeter.

For example: The candidate constructs a basic low timber retaining wall that meets project requirements. The retaining wall meets measurement specifications of between 350 millimetres and 1 metre, and a total perimeter length of not less than 2.4 metres. The materials and cutting list identify essential components, such as treated timber for the posts, retaining timber, scoria for drainage, and concrete for the footing. The candidate prepares the site by marking the post positions and boring to the total depth as is the height of the intended retaining wall. The posts are fixed correctly at the intended angle of 1:10 but there may be inconsistencies in angles present. Retaining timber is attached but minor gaps and unevenness may be present. The finished wall is functional, providing appropriate support to the drainage, scoria, and soil behind it, with some minor surface imperfections.

Kaiaka | Merit

The candidate uses efficient techniques when constructing the retaining wall, resulting in a quality finish. The materials and cutting list are well-prepared. The construction process demonstrates effective and efficient use of tools and techniques, resulting in a wall that meets the intended design specifications.

Indicators for Merit:

- Materials and cutting lists are detailed and accurately prepared.
- Foundation preparation is completed efficiently using correct techniques.
- Wall components are constructed with good alignment and stability.
- Finished wall demonstrates attention to detail with properly aligned components.
- Retaining wall meets size requirements of 350 mm–1 m high with a minimum 2.4 m perimeter.

For example: The candidate constructs a garden retaining wall with efficient techniques using keystone blocks. The retaining wall meets measurement specifications of between 350 millimetres and 1 metre, and a total perimeter length of not less than 2.4 metres. The materials list incorporates all necessary components such as correct quantities of keystone blocks, fixing pins and gravel for drainage. The preparation work involves careful excavation, compacting and leveling of 150mm base course, ensuring stability. The blocks are laid level, with good alignment and minimal gaps, resulting in a sturdy structure. The keystone block retaining wall is backfilled with drainage coil and scoria to deflect water away from the wall. The finished wall exhibits level surfaces and proper drainage features.

Kairangi | Excellence

The candidate skilfullly constructs a retaining wall, with a high level of precision. The materials and site are prepared thoroughly, ensuring optimal conditions for construction. The retaining wall is constructed and finished with accurate assembly and fixing techniques. Quality checks ensure the wall is durable and consistent with the project documentation.

Indicators for Excellence:

- Materials and cutting list cover all aspects of preparation, construction, and finish.
- Preparation work reflects advanced techniques for site readiness and component assembly.
- Wall components are measured, cut, and fixed accurately, achieving a durable structure.
- Finished wall demonstrates a high standard of finish, with no visible gaps or uneven surfaces.
- Quality checks throughout the project reflect improvements in project tasks.
- Retaining wall meets size requirements of 350 mm–1 m high with a minimum 2.4 m perimeter.

For example: The candidate constructs a timber retaining wall to meet measurement specifications of between 350 millimetres and 1 metre, and a total perimeter length of not less than 2.4 metres. The materials list details all components, including treated timber posts, retaining timber, drainage coil, scoria for drainage, and appropriate fixings and concrete. The preparation work reflects precise techniques, with accurate excavation of post holes. The posts are cut and accurately spaced for their size according to specifications. They are fixed

in place using accurate quantities of concrete at a slope of 1:10. Timber is measured, cut, and fixed with precision, achieving a high standard of finish. Quality checks undertaken throughout the project reflect improvements in construction. The finished wall demonstrates durability, and a high standard of finish, with no visible gaps and a well-executed drainage system.

40566: Make a cupboard with a drawer as a BCATS project

This skill standard recognises the skills to make a cupboard with a drawer as a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not construct a functional cupboard with a drawer. The material preparation or assembly process is incomplete, and components are not fixed securely. The finished cupboard is inadequate and does not meet the required dimensions, stability, or functionality.

Indicators for Not Achieved:

- Materials and cutting list are incomplete or poorly calculated.
- Cuts are inaccurate, leading to misaligned components that do not function.
- Components are assembled inadequately, leading to instability.
- Drawer is poorly fitted, resulting in misalignment.
- Finished cupboard exhibits visible failures in functionality and finish.

Paetae | Achieved

The candidate successfully constructs a functional cupboard with a drawer that meets project documentation. The materials and cutting list are prepared with components identified and calculated correctly. The basic techniques are used in the construction process, resulting in a cupboard that is functional, though minor inconsistencies may be present.

Indicators for Achieved:

- Materials and cutting list include components but may lack detail in quantities or specifications.
- Materials are marked out and cut with minor inconsistencies that do not affect overall functionality.
- Assembly reflects appropriate fixing methods with some minor inaccuracies such as misalignment.
- Drawer is fitted with minor discrepancies in alignment or operation.
- Finished cupboard has minor inconsistencies in surface quality.

For example: The candidate constructs a functional bedside cabinet that includes a cupboard and a drawer, meeting basic project documentation. The materials and cutting list identify essential components, such as 22mm birch plywood for the frame, cupboard doors, drawer and fixing components. The materials are marked out, cut, and pre-drilled, although some cuts may show minor inaccuracies. The components are sanded and pre-finished, ready for assembly. The assembly process is completed with basic techniques, the drawer demonstrates functional dovetail joints that slide on runners via a rebate on each side. The

finished cabinet is functional, providing storage with minor surface imperfections and alignment issues in the drawer and cupboard.

Kaiaka | Merit

The candidate efficiently constructs a cupboard with a drawer, resulting in a quality finish. The materials and cutting list are well-prepared, and components are cut accurately according to project documentation. Components are joined and fixed securely using appropriate methods suitable to the project, resulting in a quality finish.

Indicators for Merit:

- Materials and cutting list are detailed and accurately prepared.
- Efficient cutting techniques result in smooth edges.
- Assembly of components demonstrates effective use of fixing and jointing methods.
- Drawer is fitted correctly, and functions smoothly with proper alignment.
- Finished cupboard exhibits attention to detail with smooth surfaces and properly aligned components.

For example: The candidate constructs a small storage cupboard that features a well-functioning drawer. The materials and cutting list are detailed, such as framing timber, MDF siding, cupboard doors, drawer and appropriate screws and hardware. The candidate efficiently prepares the worksite and required tools. The components are marked out, cut, pre-drilled and preparation work involves careful marking and leveling of the components, ensuring a stable assembly. The drawer is assembled with stable jointing methods, fitted correctly, and operates smoothly, with minimal gaps. The finished cupboard exhibits a quality appearance, with properly aligned doors and a smooth surface finish. The candidate demonstrates quality checks throughout the process.

Kairangi | Excellence

The candidate skilfully constructs a cupboard with a drawer, with precision achieving a high standard of finish. The cupboard and drawer are constructed with advanced skill, accurate assembly and fixing techniques. Quality checks are undertaken throughout the construction process, and the finished cupboard demonstrates durability, stability, and consistency with the project documentation.

Indicators for Excellence:

- Components are measured, cut demonstrating efficient use of materials.
- Components are fixed with precision, achieving a durable structure.
- Finished cupboard demonstrates a high standard of finish, with no visible gaps or uneven surfaces.
- Quality checks throughout the project reflect improvements in project tasks.

For example: The candidate constructs a wardrobe unit that includes a spacious hanging area and a functional drawer. The materials and cutting list are comprehensive, detailing all components, including premium-grade plywood, solid timber for the frame, hardware for hinges and drawer slides. The preparation work reflects advanced techniques, with accurate cutting, precise joinery, and thorough checking of all measurements. The wardrobe is assembled with high attention to detail, ensuring all components fit seamlessly together. The assembly process reflects precision with thorough quality checks. The finished wardrobe unit demonstrates a high standard of quality, featuring smooth surfaces, accurate dimensions, and a well-fitted drawer that operates flawlessly.

40567: Construct a timber fence as a BCATS project

This skill standard recognises the skills to construct a residential timber fence as a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not construct a timber fence to meet project documentation. The material preparation or assembly process is incomplete, and components are not fixed securely. The finished fence does not meet the required dimensions or stability.

Indicators for Not Achieved:

- Materials and cutting list are incomplete or poorly calculated.
- Poorly assembling of components leading to misalignment and failure to meet project requirements.
- Incorrect fixing methods resulting in weak or unstable structure.
- Finished fence exhibits visible failures in functionality and finish.

Paetae | Achieved

The candidate successfully constructs a functional timber fence that meets project documentation. The materials and cutting list were prepared and basic techniques are used in the construction process. The fence is functional, though minor inconsistencies may be present in alignment, level or surface finish.

Indicators for Achieved:

- Materials and cutting list include components but may lack detail in quantities or specifications.
- Area for the fence is marked out, and post holes are excavated adequately.
- Posts and rails are assembled with minor discrepancies in alignment.
- Finished fence demonstrates minor inconsistencies in surface quality.

For example: The candidate constructs a basic timber fence that is 1.8m high and 4.8 metres long, meeting project documentation. The materials and cutting list identify essential components, such as 3 x H4 treated timber for the posts and quick set concrete for fixing in place. H3 treated timber rails, and palings for cladding and galvanised nails for fixing. The candidate prepares the worksite by clearing the area and ensuring all tools are ready. The postholes are at a sufficient depth and are spaced and set in place using appropriate methods, but some may show minor misalignment. The rails are level and secure and palings are fixed sufficiently. The posts are cut to the finished height. The finished fence is functional, providing boundary support, with minor surface imperfections and uneven gaps between some palings.

Kaiaka | Merit

The candidate uses efficient techniques when constructing the timber fence, resulting in a quality finish. Tools and techniques were used effectively through the construction process,

while following safety protocols. The fence components are cut accurately and fixed securely, resulting in a quality finish.

Indicators for Merit:

- Materials and cutting list are detailed and accurately prepared.
- Post holes are prepared efficiently demonstrating correct techniques and material quantities.
- Assembly of fence components demonstrate effective techniques.
- Fence is constructed with good alignment and stability.
- Finished fence exhibits attention to detail with level surfaces and properly aligned components.

For example: The candidate constructs timber fence that is 1.8m high and 4.8, long demonstrating efficient techniques and attention to detail. The materials and cutting list include all necessary components such as H4 treated timber for the 3 required posts and quick set concrete for fixing in place. H3 treated timber rails, and palings for cladding and galvanised nails for fixing. The candidate ensures proper marking for post positions and using appropriate tools for excavation. The posts are level and set securely, and the rails are attached with good alignment. The palings are fixed properly, resulting in a sturdy fence with even gaps. Quality measures are demonstrated throughout the process and the finished fence exhibits a quality appearance, with level surfaces and well-aligned components.

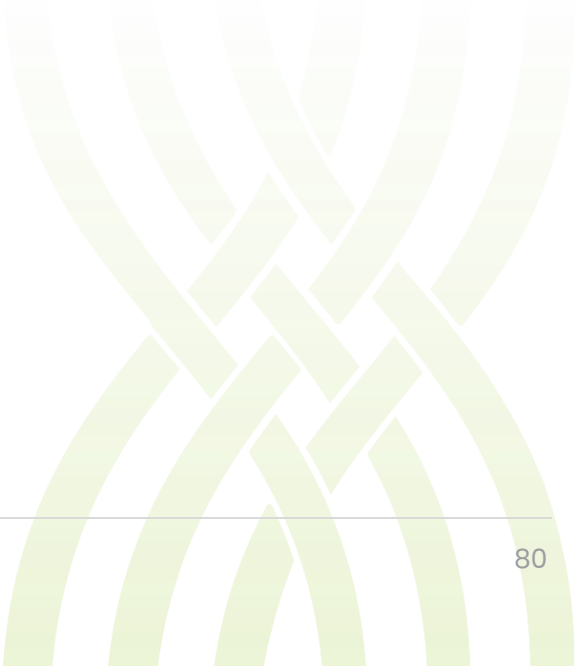
Kairangi | Excellence

The candidate skilfully constructs a timber fence with a high level of precision and attention to quality checks throughout the project. The fence is constructed with accurate assembly and fixing techniques, achieving a stable and durable structure. The finished fence demonstrates a high standard of quality, with level surfaces and accurate dimensions.

Indicators for Excellence:

- Preparation work reflects advanced techniques for site readiness and component assembly.
- Components are measured, cut, and fixed with precision, achieving a durable structure.
- Finished fence has no visible gaps or uneven surfaces.
- Quality checks are documented throughout the project, reflecting improvements in project tasks.

For example: The candidate constructs a basic timber fence that is 1.8m high by 4.8 metres long, demonstrating a high standard of finish with precision. The materials and cutting list are comprehensively prepared, detailing all components including 3 x H4 treated timber for the posts and quick set concrete for fixing in place. H3 treated timber rails, and palings for cladding and galvanised nails for fixing. The preparation work reflects advanced techniques, with accurate excavation of post holes. The posts are evenly spaced and fixed in place using accurate quantities of concrete. The rails and paling are attached with precision resulting in a durable and visually appealing fence. Quality checks are documented throughout the project and reflect improvements in construction. The finished product demonstrates excellent quality, with level surfaces, even gaps, and a well-executed application of weather treatment.



40568: Apply trade skills to complete a BCATS project

This skill standard recognises the application of trade skills to complete a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not apply trade skills to complete a BCATS project. Project components preparation and construction tasks are incomplete or incorrect. The final product that does not meet the project documentation.

Indicators for Not Achieved:

- Project components are poorly identified or missing.
- Materials preparation is incomplete, incorrect, or does not match project documentation.
- Basic techniques or safe use of tools required for the project are not demonstrated.
- Tasks are completed without proper adherence to project documentation and quality checks
- Finished project exhibits visible failures in functionality and quality.

Paetae | Achieved

The candidate successfully applies trade skills to complete a BCATS project, meeting basic project requirements. The project components are identified, and prepared. The project is completed following project documentation with quality checks. The final project is functional, though minor inconsistencies may be present in the finish.

Indicators for Achieved:

- Project components are identified, but some details may be lacking.
- Materials are prepared, with most components correctly calculated.
- Site safety is considered in setup, and safe use of tools is demonstrated.
- Tasks are completed according to the stages identified in the project documentation,
- Finished project meets functional requirements, though it may show minor inconsistencies in quality.

For example: The candidate undertakes a furniture refinishing project, restoring a coffee table using recycled timber components. The candidate identifies and prepares materials appropriately, selecting sandpaper, filler, reclaimed wood sections, and wood stain. Preparation involves cleaning, minor repairs to the table structure, and integrating recycled timber into the tabletop. Surface preparation shows some inconsistencies (e.g., uneven sanding), but the main construction and refinishing tasks are completed safely using basic techniques. The finished coffee table is functional and visually improved, although minor imperfections remain visible. A basic final quality check is conducted, noting surface finish and join quality.

Kaiaka | Merit

The candidate uses efficiently applies trade skills to complete a BCATS project, resulting in a quality finish. The project components are clearly identified, and materials well-prepared and

accurate. Techniques and processes are applied with attention to detail to complete the required tasks. The finished project meets the project documentation, with attention to detail evident in the construction and finish.

Indicators for Merit:

- Materials are well-prepared and asks are completed demonstrating effective techniques and safe use of tools.
- Processes and construction sequences are followed with efficiency.
- Finished project exhibits quality, with surfaces suitable to the project's intended environment.
- Quality checks are completed during and after construction, supporting the quality outcome.

For example: The candidate efficiently completes a room resurfacing and painting project, preparing walls by repairing plaster surfaces before painting. The candidate identifies materials including filler compounds, sanding tools, undercoat, and finishing paint. Damaged areas on the walls are effectively filled and sanded to a smooth finish before undercoating. The candidate applies two topcoats with effective brush and roller techniques, ensuring consistent colour and minimal brush marks. Minor inconsistencies are corrected during the work through proactive inspection. The finished room meets functional and aesthetic standards, and the candidate evaluates the project, suggesting improvements such as better blending of plaster joins.

Kairangi | Excellence

The candidate skilfully applies trade skills with precision to complete a BCATS project, with a high level of precision throughout the process. The project components are accurately prepared. Project tasks are carried out with precision and continuous quality control, resulting in a product that meets or exceeds project documentation standards.

Indicators for Excellence:

- Project components are detailed and prepared with precision.
- Materials are accurately calculated, covering all aspects of the project.
- Tasks are completed with precision, demonstrating advanced techniques and safe tool use.
- The finished project demonstrates a high standard of quality, with accurate dimensions.
- Finishing processes are thorough, resulting in high-quality surfaces with no visible patchiness or irregularity of work.
- Comprehensive quality checks are documented during the project, showing evidence of continuous improvement.
- A final reflection is insightful, considering future improvements in techniques or materials.

For example: The candidate constructs and installs a custom-built shelving unit for an alcove space, applying trade skills with precision. The candidate prepares a detailed cutting list based on site measurements, selects and prepares materials including pre-primed MDF, timber trim, fixings, and finishing products. Components are marked out and cut with high precision, ensuring accurate fit within a non-standard space. The shelving unit is assembled and installed with seamless joins, flush finishes, and correct alignment, with quality checks conducted at each stage. Finishing includes sanding, gap-filling, priming, and painting to a

professional standard, with no visible blemishes. The evaluation reflects comprehensive insights into how fitting, aesthetic, and structural elements were optimised for durability and function.

LEVEL 3 SKILL STANDARDS

40569: Contribute to a healthy and safe BCATS Environment

This skill standard recognises the skills to contribute to a healthy and safe environment during the completion of a project or related tasks for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not contribute to a healthy and safe BCATS environment. Risks are not appropriately controlled, including site specific monitoring. The candidate does not to participate in the necessary health and safety induction or have awareness of available safety documentation for the BCATS environment.

Indicators for Not Achieved:

- Input on health and safety practices is missing or irrelevant.
- Risks in the BCATS environment are not identified or appropriate controls are not implemented and monitored.
- Tools and equipment are not kept clean or safe before and after use.
- Participation in site health and safety induction is either incomplete or verification documents are not identified and completed
- Limited understanding of their responsibilities regarding health and safety in the BCATS environment.

Paetae | Achieved

The candidate successfully contributes to a healthy and safe BCATS environment. Input is provided regarding basic workplace health and safety practices, and controls are implemented and monitored for identified risks. The candidate applies expectations set out from the health and safety induction and verifies/completes safety induction documents as required.

Indicators for Achieved:

- Input on day-to-day application of health and safety practices is provided.
- Identified risks are managed by monitoring appropriate control measures.
- Tools and equipment are kept clean and safe before and after use.
- Applies responsibilities regarding health and safety as instructed in the induction.
- Health and safety induction documents are identified and completed as necessary.

For example: The candidate participates in safety and site induction and briefings while working on the concrete path at the town hall. They identify hazards, such as public safety concerns in an open area and the risks associated with wet and hazardous material. The

candidate understands necessary health and safety induction documents as they relate to them, including a hazard register and workplace map. They apply safety protocols by reporting unsafe conditions to the supervisor during the project. The candidate keeps tools organised and ensures they are cleaned after use. They complete the health and safety documentation required of their role, contributing to a healthy and safe working environment.

Kaiaka | Merit

The candidate consistently contributes to a healthy and safe BCATS environment. Ongoing input is given regarding workplace safety, and appropriate controls are implemented and monitored for identified risks. The candidate is attentive throughout health and safety induction and applies expectations consistently, including completing health and safety documents as required.

Indicators for Merit:

- Input on health and safety practices is consistent and relevant.
- Controls are implemented and monitored/modified in response to risks in the BCATS environment.
- Tools and equipment are maintained in a safe and clean condition.
- Consistent and independent application of responsibilities regarding health and safety in the BCATS environment.

For example: The candidate contributes to health and safety practices while constructing a bespoke curved pergola on a school site. They identify potential risks, such as working at heights and handling heavy materials, and actively encourage team members to wear appropriate personal protective equipment (PPE), including hard hats and safety glasses. Before construction, the candidate contributes to a safety discussion about safe lifting techniques and the importance of keeping the work area tidy. They follow established safety protocols and monitor the work environment to ensure that tools are organised and encourage team members to adhere to safety measures. The candidate completes required health and safety induction documents, including a hazard register and workplace map, and regularly updates or verifies them, demonstrating a clear understanding of their safety responsibilities.

Kairangi | Excellence

The candidate proactively supports a healthy and safe BCATS environment by offering timely input to improve safety practices and ensuring appropriate risk controls are implemented and monitored. They actively engage in their own health and safety induction applying the guidance to help create a safe working environment. They also promote a culture of safety among peers.

Indicators for Excellence:

- Input on health and safety practices is insightful, timely, and proactive.
- Controls for identified risks in the BCATS environment are comprehensively implemented and monitored, guided by induction processes.
- Tools and equipment are maintained in a consistently safe and clean condition.
- Understanding of health and safety responsibilities is demonstrated through active promotion of a safety-focused culture among peers.

- Health and safety induction documents are thoroughly completed and applied to support safe work practices.

For example: The candidate is proactive in applying health and safety practices while constructing a retaining wall as a group project. They identify potential hazards in the environment, such as excavation risks and heavy lifting, and implement and monitor comprehensive control measure. They ensure all team members wear appropriate PPE like hard hats and gloves. Before construction begins, the candidate leads a safety briefing on lifting techniques and maintaining a clear work area, applying guidance from their own health and safety induction. They proactively set up site barriers, ensure the hazard register is clearly displayed, and maintain tools and equipment in a clean, safe condition. Throughout the project, they monitor safety protocols through regular safety checks and actively encourage peers to follow safe practices. All required health and safety documentation, including risk assessments and safety plans, is thoroughly completed and applied, reinforcing the candidate's consistent and proactive commitment to creating a safe working environment.

40570: Work with materials for a BCATS project

This skill standard recognises the skills to select and work with materials in a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not identify the correct materials or work with materials appropriately for a BCATS project. Materials are not selected based on their properties, and there is a lack of understanding regarding proper handling, storage, and sustainable practices, leading to improper use or excessive waste.

Indicators for Not Achieved:

- Input on health and safety practices is missing or irrelevant.
- Risks in the BCATS environment are not identified or appropriate controls are not implemented and monitored.
- Tools and equipment are not kept clean or safe before and after use.
- Participation in site health and safety induction is either incomplete or verification documents are not identified and completed
- Limited understanding of their responsibilities regarding health and safety in the BCATS environment.

Paetae | Achieved

The candidate successfully identifies and justifies the selection of materials used in a BCATS project. Justification of materials includes reference to the relevant properties of the materials for applications in the project and considerations for minimising waste and sustainable practices. The candidate handles, uses and stores materials safely.

Indicators for Achieved:

- Materials are identified and selected with basic justification based on their properties.
- Materials chosen with consideration of sustainable principles and some awareness of recycling or repurposing.
- Safe handling practices for the selected materials.
- Minimise material waste during the project.

For example: The candidate successfully identifies and describes the requirements for materials used in constructing a deck with inbuilt seating as a group project, meeting project requirements. They identify different types of timber used in deck construction. They reference the use of different treatments of timber for piles, bearers, joists and decking boards, noting its suitability for outdoor applications due to its durability and resistance to rot. The candidate stores materials properly to prevent warping or damage. They apply correct handling techniques while assembling the deck, allowing for some minor waste but ensuring that the overall structure meets the project specifications. The candidate shows awareness of safety protocols related to material handling, such as wearing gloves and using appropriate lifting techniques.

Kaiaka | Merit

The candidate successfully identifies and justifies the selection of materials used in a BCATS project with attention to detail and awareness of sustainable principles. They consider the requirements of the project use materials efficiently and minimising waste. The candidate consistently ensures the materials are handled and stored safely.

Indicators for Merit:

- Materials are selected with justification based on their properties, sustainability, and suitability.
- Safe handling and storage of materials are consistently demonstrated, with consideration for minimising environmental impact.
- Materials are used efficiently, and waste is minimised through careful planning.
- Consideration of recycling or repurposing leftover materials is demonstrated.

For example: The candidate demonstrates attention to detail in their selection and use of materials while constructing a bespoke curved pergola. They select appropriate materials, such as the correct treatment of timber for the frame and polycarbonate panels for the roof, recognising their suitability for outdoor use and ability to withstand various weather conditions. The candidate describes the properties of the materials, such as the strength of treated timber and the lightweight nature of polycarbonate. They justify their material choice based on its properties and demonstrate efficient cutting and assembly techniques suitable for the material and to minimising waste. They implement efficient material specific waste-reduction strategies, such as planning cuts to minimise offcuts. Throughout the project, the candidate consistently applies safe handling practices.

Kairangi | Excellence

The candidate is skilful in their use of materials. Their material selection reflects a thorough understanding of their properties, sustainability, and lifecycle. They optimise their use of materials through precise techniques to minimise waste and prevent damage while maintaining high standards of safety and material organisation throughout the process.

Indicators for Excellence:

- Optimal material selection based on a comprehensive understanding of materials.
- Sustainability and environmental factors are considered when selecting materials
- Precise use of materials to optimise durability, aesthetics, and project requirements.
- Waste is minimised to the greatest practical extent, with effective strategies for recycling or disposing of materials.

For example: The candidate exhibits exceptional skill and knowledge in constructing a workstation desk from a variety of materials, including timber for the surface and steel for the frame. They justify their choices based on durability, aesthetic appeal, and functionality. The candidate carefully selects the appropriate materials to join the timber and steel, ensuring strength and stability in the final assembly. The candidate meticulously prepares the materials for a seamless assembly. They implement advanced safety practices when handling the materials. During assembly, the candidate skilfully combines the timber and steel, employing effective techniques. They provide insights on material life cycle and sustainability.

40571: Manage the use of tools, equipment, and machinery for a BCATS project

This skill standard recognises the ability to manage tools, equipment, and machinery for a project in the building, construction, and allied trades sector.

Kāore i eke | Not Achieved

The candidate does not manage tools, equipment, and machinery effectively for the BCATS project. They fail to select appropriate items or follow safety protocols, resulting in project deficiencies.

Indicators for Not Achieved:

- Tool selection does not meet project requirements.
- Setup and use of tools and equipment do not follow manufacturer instructions or project requirements.
- Safety practices are not followed, creating risk in the work environment.
- Maintenance skills are not satisfactorily demonstrated.

Paetae | Achieved

The candidate successfully selects and uses appropriate tools, equipment, and machinery to meet project requirements. Tools, equipment and machinery are set up used following manufacturer's instructions. The candidate demonstrates safe working practices, and they maintain items appropriately while ensuring safety is observed.

Indicators for Achieved:

- Tool selection meets project requirements.
- Setup, inspection, and use follow manufacturer instructions and project requirements.
- Safety practices are maintained and are in line with health and safety protocols.
- Basic maintenance tasks are completed to acceptable standards.

For example: The candidate constructs an exterior wooden rocking chair, selecting appropriate tools such as an impact driver, circular saw, and jigsaw based on project needs. They follow manufacturer instructions. For example, adjusting the cutting depth and securing the guard on the circular saw when shaping the curved rockers. Tools are inspected before use, with any faults reported to the supervisor. The candidate independently identifies and replaces an incorrect jigsaw blade, showing initiative and care. They wear appropriate PPE, including safety glasses and ear protection, maintaining a safe workspace. On completion, they carry out basic maintenance, such as aligning the circular saw blade and cleaning and storing tools to ensure they remain in good condition.

Kaiaka | Merit

The candidate efficiently selects and manages tools, equipment and machinery suitable for the project requirements. They consistently use them with efficiency and attention to detail.

They maintain a high level of safety and ensure that all equipment is properly maintained and safely stored, reporting any faulty or damaged items when necessary.

Indicators for Merit:

- Tool selection clearly aligns with project requirements.
- Setup, use, and maintenance are performed with attention to detail for effective performance.
- Safety practices are consistently applied to maintain a safe environment.
- Maintenance is consistent and ensures equipment reliability.

For example: The candidate builds a timber coffee table with a resin insert, selecting a range of power tools, including an impact driver, a circular saw, and a router, based on the project requirements. They select the circular saw and create precise cuts on the timber legs and the router for creating a channel with smooth edge for the resin insert. The candidate sets up each tool, checking for functionality, and ensuring all safety features, such as blade guards and safety switches, are working properly. They maintain the tools throughout the project, performing basic maintenance such as cleaning the tools and ensuring they remain in good working condition. The candidate follows safety protocols, wearing full PPE and ensuring the work area is tidy and free of hazards. They document their maintenance routine, outlining how each tool was checked, cleaned, and adjusted as necessary to maintain functionality. After completing the project, the candidate stores the tools in an organised manner including equipment used like tape measures and levels in the correct location.

Kairangi | Excellence

The candidate skilfully manages the selection of tools, equipment and machinery suitable for the project requirements. The candidate manages and maintains tools, equipment and machinery, ensuring optimal results and a safe working environment.

Indicators for Excellence:

- Tool selection clearly aligns with project requirements.
- Setup, use, and maintenance are performed with attention to detail for effective performance.
- Safety practices are consistently applied to maintain a safe environment.
- Maintenance is consistent and ensures equipment reliability.

For example: The candidate skilfully uses tools in the construction a multi-functional wardrobe unit. They select and use a timber lathe, router, and hand sander for their specific function. The lathe is precisely aligned and calibrated to shape and smooth components with accuracy. The router is fine-tuned for clean, consistent grooves and intricate edge profiles, while the hand sander is used with control to achieve a high-quality surface finish. Tools are carefully inspected before use to ensure all safety features are operational. Wearing full PPE, including safety glasses, boots, and hearing protection, the candidate maintains a clean, dust-controlled workspace. Their tool handling reflects a high level of skill, with adjustments made to optimise performance and ensure a professional standard of workmanship. Regular inspection, cleaning, and basic maintenance keep tools in peak condition for ongoing use.

40572: Apply mathematical processes to a BCATS project

This skill standard recognises the skills to apply mathematical processes to a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not apply mathematical processes to a BCATS project. They fail to complete calculations or measurements correctly and are not within allowable tolerances for project requirements.

Indicators for Not Achieved:

- Mathematical processes are not applied correctly.
- Measurements are inaccurate or incomplete.
- Calculations and geometry methods are not used or interpreted effectively.
- Results are not interpreted or recorded appropriately for the project.

Paetae | Achieved

The candidate successfully uses mathematical processes to meet project requirements, demonstrating an understanding of project specifications and the ability to follow instructions accurately. They use calculations and fundamental geometric principles to solve problems to meet project requirements.

Indicators for Achieved:

- Mathematical processes are correctly chosen to solve problems.
- Fundamental geometric and trigonometric principles are used to meet project specifications.
- Calculations, including simple measurements, areas, and angles, are applied accurately.
- Measurement results are correctly interpreted and are within allowable tolerances.

For example: The candidate constructs a foldable flat-pack dining table that is able to be folded and flat-packed. This involves carefully interpreting the project specifications and calculating the dimensions for each component. This includes determining the length, width, and depth of the legs and support beams. They calculate the spacing between the legs and beams to ensure proper alignment during assembly. The candidate uses basic geometric principles to determine the correct angles for the table legs to ensure they are positioned at 90 degrees to the tabletop. By referencing the scale on the working drawings, the candidate accurately converts scaled measurements into real-world dimensions. The candidate precisely measures the dimensions of the folding mechanism to guarantee that the table can be easily assembled and disassembled. Throughout the process, they verify all measurements and check the final alignment of components to ensure everything fits as intended.

Kaiaka | Merit

The candidate efficiently applies mathematical processes to solve complex problems in a BCATS project. They use measurement and mathematical calculations independently to complete tasks with fluency and precision.

Indicators for Merit:

- Efficient application of measurements, including angles, areas, and perimeters is demonstrated.
- Geometric methods, such as calculating angles, areas, or volumes, are used effectively.
- Calculations, measurements, and geometric methods are accurately recorded and applied to the problem.

For example: The candidate constructs a sewing machine table that folds into a compact cabinet. They interpret the working drawings, using the scale to accurately convert dimensions into millimetres. To determine the total material required, the candidate calculates the area of the tabletop using multiplication. They estimate material costs by referencing the cutting list and incorporating allowances for potential wastage. Using trigonometry, the candidate calculates the angles required for the folding mechanism, ensuring smooth operation and precise fit. Geometric methods are applied to confirm that all folding components align correctly. To ensure a stable and fluid folding action, the candidate measures and documents the distances between hinges and other key components. They also account for material thickness and verify that all clearances are appropriate.

Kairangi | Excellence

The candidate fluently applies advanced mathematical processes to solve complex problems for a BCATS project. Adaptive exploration of measurement and mathematical calculations are used to complete tasks, optimising solutions to project problems.

Indicators for Excellence:

- Mathematical processes identified and applied fluently to solve project problems.
- Measurement applications involving angles, areas, and perimeters used to optimise project solutions.
- Geometric methods such as angle, area, and volume calculations applied to optimise project outcomes.
- Adjustments made proactively to improve accuracy.
- Calculations, measurements, and geometric methods accurately recorded for the project.

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For example: The candidate constructs a gaming desk with extendable monitor stands, fluently applying advanced mathematical methods to ensure structural integrity and smooth functionality. They interpret scaled working drawings, convert measurements into millimetres, and generate a cutting list with allowances for joins and waste. Geometry is used to calculate surface areas and optimise material use, while trigonometry and Pythagoras' Theorem are applied to determine precise angles for the extendable arms. The candidate adjusts for material thickness, calculates tolerances, and verifies dimensions to ensure accurate assembly. All calculations, including measurements and costs, are clearly documented, demonstrating confident problem-solving throughout the construction process.

40573: Respond to the BCATS environment to work with others

This skill standard recognises the skills to respond to the BCATS environment to work with others in a building, construction, and allied trades environment.

Kāore i eke | Not Achieved

The candidate does respond to the BCATS environment to communicate when working with others. Information exchanged is unclear or incomplete, leading to misunderstandings or delays. The candidate struggles to adjust their communication approach to suit different situations or people involved in the project in a BCATS environment.

Indicators for Not Achieved:

- Information sources available are not used appropriately to progress project requirements or maintain safety.
- Communication is unclear, leading to misunderstandings or lack of progress.
- Contributions to team discussions or decision-making are not relevant or are lacking.
- Communication methods are inappropriate for the BCATS environment.

Paetae | Achieved

The candidate responds to the BCATS environment appropriately to understand, exchange information and collaborate within a BCATS project. Information sources available in a BCATS environment are used appropriately to progress project requirements and maintain safety. Communication is appropriate for the task, and the candidate demonstrates a basic understanding of their role within the project.

Indicators for Achieved:

- Information sources available in the BCATS environment are used appropriately to progress project requirements.
- Clear communication is demonstrated in receiving and conveying project-related information.
- Contributions to group discussions and ensures tasks are completed as required.
- Communication methods are appropriate for tasks, audience and the BCATS environment.

For example: The candidate receives instructions for constructing a deck with inbuilt seating, and demonstrates understanding by analysing the plans and seeking additional information on construction methods, tools, and techniques relevant to the task. They ask appropriate questions of team members and the instructor to clarify the project scope and expectations. They communicate effectively within the team, helping to establish clear roles and responsibilities. During group activities, the candidate actively contributes by offering constructive ideas to improve the building process and supporting others with practical tasks. Their actions reflect a sound understanding of the collaborative nature of construction work and the responsibilities involved in a BCATS project environment.

Kaiaka | Merit

The candidate responds to the BCATS environment effectively with others to ensure progression of a BCATS project. Communication is used clearly and consistently to progress project requirements, ensuring that all information is appropriate to the task, the environment and team members receive information aligned with their roles and responsibilities.

Indicators for Merit:

- Information sources are actively sought to ensure understanding of project requirements.
- Communication is consistently clear and responsive to the BCATS environment, progressing project requirements effectively.
- Relevant information is communicated clearly and in a timely manner to maintain safety.
- Active role in facilitating discussions and problem solving to support collaboration.

For example: The candidate receives instructions for constructing a lined and insulated sleepout and demonstrates a high level of understanding by independently accessing and interpreting a range of relevant information, including the Building Code, health and safety regulations, and the construction schedule. They take initiative in clarifying project expectations and ensuring compliance with regulatory and safety requirements. The candidate communicates effectively with the team, clearly defining roles and responsibilities to meet project milestones and maintain a safe working environment. They lead problem-solving efforts and propose practical solutions to challenges such as scheduling changes or material miscalculations. Their communication is clear, timely, and purposeful, contributing to efficient workflow and team cohesion.

Kairangi | Excellence

The candidate proactively responds to the BCATS environment to lead and work effectively with others. They actively seek information sources to ensure tasks meet project requirements. They take a proactive approach in collaborating with others, ensuring responsiveness to environment, roles, and safety requirements.

Indicators for Excellence:

- Information sources are actively sought to ensure understanding of project requirements.
- Leadership through proactive communication and responsiveness to the BCATS environment.
- Communication is used to lead collaboration and ensure alignment of project requirements.
- Proactive consideration of the BCATS environment when problem solving and making decisions with others to progress the project.

For example: The candidate receives instructions for constructing a bespoke curved pergola and takes proactive steps by independently researching key requirements, including working at heights regulations, suitable exterior timber, and the construction schedule. They initiate discussions with team members to clarify expectations and lead toolbox meetings to review progress and reinforce safety protocols. They proactively communicate with suppliers to confirm material availability and keep the team informed of any changes. When the original

material became unavailable, the candidate quickly facilitated a team discussion to identify and source a suitable alternative. Their forward-thinking approach and clear communication ensured the project stayed on schedule and met safety and quality standards.

40574: Plan and monitor stages of a BCATS project

This skill standard recognises the skills to plan and monitor the stages of a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not satisfactorily plan and monitor the stages of the project. The project's progress is not tracked accurately, and there is minimal attempt to identify variations from the plan. The candidate does not make necessary adjustments to the project schedule, and quality control is not implemented effectively.

Indicators for Not Achieved:

- Project stages are not identified, planned or monitored accurately.
- Construction is undertaken in an unplanned manner.
- Project stages and variations from the plan are not captured or addressed.
- Quality control procedures are not implemented or documented.

Paetae | Achieved

The candidate plans and monitors the stages of a BCATS project. They track progress and identify deviations from the plan. Basic quality control measures are implemented, and the candidate ensures the project is progressing according to the timeline.

Indicators for Achieved:

- Project stages are identified, planned and captured appropriately.
- Progress is monitored by checking the completion of stages and comparing them with the project plan.
- Variations from the plan are identified, and adjustments are made where necessary.
- Basic quality control measures are applied, and corrections are made for any variations from the plan.
- Clear communication of project progress and adjustments are captured.

For example: The candidate plans and monitors the stages of constructing a gaming desk by identifying the stages of the project and capturing all information appropriately. They regularly check all components are completed according to the project specifications. Any variations in the project, such as change in materials or cuts that do not fit, are identified, implemented, and captured appropriately. The candidate tracks progress by checking against the initial project schedule, ensuring that each part of the desk, framing, surface preparation, and finishing, is completed on time. The candidate communicates the plan and monitoring of stages of construction by drawing plans, developing a written schedule, and photographing project progress.

Kaiaka | Merit

The candidate efficiently plans and monitors the stages of a BCATS project. They consistently track progress and identify variations from the plan. They make adjustments to maintain the project's alignment with the project requirements, ensuring that quality is maintained throughout each stage.

Indicators for Merit:

- Project stages are identified and efficiently planned.
- Monitoring is consistent across project stages, with variations from the plan identified and addressed.
- Adjustments are made to ensure alignment with project requirements, with a focus on maintaining quality.
- Documentation of changes, progress, and quality control measures is maintained consistently.

For example: The candidate plans and monitors the construction of a portable tool cupboard, ensuring efficiencies at each stage of cutting, assembly, and finishing. When discrepancies arise, such as delays in material delivery or slight miscalculations in measurements, the candidate makes immediate adjustments, modifying the design where necessary to stay within the project timeline or changing the material requirements to meet project costs. Changes, such as the need for additional tools or equipment are identified, planned, and recorded. The candidate documents the adjustments made, including updated timelines and design changes. Quality control is maintained, and each component of the cupboard is checked for durability and fit before final assembly demonstrating an effective result.

Kairangi | Excellence

The candidate skilfully plans and monitors the stages of a BCATS project. They proactively identify variations and implement solutions to keep the project on track whilst ensuring a quality result. They capture detail in adjustments and ensure every aspect of the project is aligned with project requirements. Quality control is maintained at a high standard, with attention to detail across every stage of the project.

Indicators for Excellence:

- Proactive planning, monitoring and adjustments ensure the project progresses smoothly.
- Detailed solutions are provided for variations from the plan, ensuring alignment with project goals.
- High-quality standards are maintained throughout stages of the project, with thorough checks.
- Documentation capturing progress is detailed resulting in a high-quality outcome.

For example: The candidate skilfully plans, monitors, and quality controls the stages of constructing a dining room table. They proactively identify variations from the original plan, such as misalignments in the table frame, and implement effective solutions, ensuring that the project stays on track and the final product meets high-quality standards. Adjustments are thoroughly documented, ensuring every aspect of the project aligns with the design specifications. Quality control procedures are applied meticulously, with attention to detail across every stage, including the measurement and fitting of joints, sanding, and finishing.

The candidate ensures that the project progresses efficiently, with each phase completed on schedule. The final outcome exceeds expectations, showcasing the candidate's ability to manage and execute complex tasks while maintaining a high level of craftsmanship.

40575: Incorporate other parties into a BCATS project schedule

This skill standard recognises the skills to incorporate other building, construction, and allied trades parties into a project schedule.

Kāore i eke | Not Achieved

The candidate does successfully incorporate other parties into the BCATS project schedule. The roles, responsibilities and contributions of other trades are not clearly identified. The communication with other parties is insufficient leading to confusion or delays in the project.

Indicators for Not Achieved:

- The roles and responsibilities of other parties are not clearly identified or missing entirely.
- Contributions of other parties and their impact on the project process is not considered.
- Project schedule fails to incorporate the requirements or limitations of other parties.
- Communication with other parties is inadequate, and responsibilities are not confirmed.

Paetae | Achieved

The candidate successfully incorporates other parties into the BCATS project schedule, with an outline of roles and responsibilities. The project schedule includes contributions from relevant parties, and the project proceeds without major scheduling conflicts, though some minor inefficiencies may occur.

Indicators for Achieved:

- Roles and responsibilities of other trades are identified and included in the schedule.
- Contributions of other trades are outlined but may not be fully integrated with the project schedule.
- Communication with other trades is established and adequately maintained.
- Project schedule incorporates the basic requirements and limitations of other parties, with minor inefficiencies.

For example: The candidate identifies and incorporates a plumber, electrician, and solar panel installer into the project schedule for a tiny house build. The other parties' roles and the required tasks are sufficiently identified, and the schedule is integrated with the overall build schedule. The other parties' contributions to the project are outlined, identifying limitations such as site access and space limitations. The candidate identifies how the work of these trades must be coordinated to avoid delays considering the space limitations and ensures that each trade completes their tasks in a logical sequence. While communication with all parties is established, some minor delays occur due to overlapping scheduling and resource availability.

Kaiaka | Merit

The candidate efficiently incorporates other parties into the project schedule. The project schedule is refined, reflecting a thorough understanding of how the contributions of various trades affected the production or construction process. The candidate consistently communicates and coordinates with other parties proactively, ensuring that their tasks are completed efficiently and on time.

Indicators for Merit:

- Roles, responsibilities and contributions of other parties are clearly outlined, demonstrating.
- Project schedule is adjusted to reflect the impact of each trade, ensuring smooth transitions between tasks.
- Communication with other parties is consistent and timely with responsibilities confirmed and any necessary adjustments made.
- Project schedule effectively incorporates the limitations of other trades and parties, minimising disruptions.

For example: The candidate successfully incorporates a mechanical engineer, auto electrician, and vehicle testing station into the project schedule for a teardrop caravan trailer. The other parties' roles and responsibilities are clearly outlined, demonstrating a thorough understanding of their contributions to the construction of the caravan trailer. Regular communication with other parties contributes to assessment of impact with the project schedule. The candidate communicates regularly with other parties to ensure manufacture and installation of components occur at the correct stage of the build, avoiding delays. The candidate adjusts the schedule to account for any limitations in trade availability or equipment needs. The project progresses smoothly with no major delays.

Kairangi | Excellence

The candidate effectively incorporates other parties into the BCATS project schedule. The roles and responsibilities are detailed, and the impact of each trade on the overall process is proactively considered. The project schedule is highly detailed, allowing for adjustments to improve efficiency. Communications with other parties ensure all parties are aligned and responsible for their contributions.

Indicators for Excellence:

- Roles and responsibilities of other trades detail clear rationale for their inclusion in the schedule.
- Project schedule is comprehensive, allowing for adjustments to improve efficiency for the project.
- Contributions of other parties are carefully integrated into the project process.
- Communication with other trades and suppliers is clear, proactive, and thorough, ensuring smooth coordination.

For example: The candidate demonstrates exceptional skill in incorporating multiple trades into the BCATS project schedule for the installation of a ventilation system in a sleepout build, including refrigeration and electrical installation. The candidate outlines each trade's role in detail with a rationale for their contribution to the project. They ensure their work is scheduled to prevent interference and optimise workflow. The refrigeration technician installs the

ventilation system, ensuring efficient climate control. The electrician installs wiring for the ventilation system. The candidate demonstrates efficiency to the schedule by identifying wiring for lighting and power at the same time as the ventilation system. The candidate adjusts the schedule to ensure that each trade completes their tasks without overlap or delay, ensuring efficiency in the project schedule. Communication with all trades is proactive, with regular updates and confirmations of responsibilities to ensure a seamless project flow.

40576: Create and evaluate a BCATS project

This skill standard recognises the skills to create and evaluate a project for building, construction, and allied trades.

Kāore i eke | Not Achieved

The candidate does not meet the requirements to create and evaluate a BCATS project. The project components marking out, processing or finishing processes are incomplete or poorly executed. The evaluation fails to meet the standard for assessing the suitability and potential improvements for future projects.

Indicators for Not Achieved:

- Project components are inadequately marked out or missing key details.
- Processing and assembly were not carried out according to project requirements.
- Finished product is substandard, with significant issues in functionality, safety, or quality.
- Evaluation lacks analysis of the suitability for the intended purpose and environment.
- Recommendations for future projects are not identified.

Paetae | Achieved

The candidate successfully creates and evaluates a BCATS project. Project components are marked out and processed according to project requirements with acceptable variations. The finishing processes result in an overall functional product. The evaluation identifies the suitability of the finished product for its intended use and provides recommendations for future projects.

Indicators for Achieved:

- Materials list is prepared, with most components calculated correctly.
- Project components are marked out, processed, and assembled, but some minor inconsistencies or missing details may be present.
- Tasks are completed with an understanding of required techniques.
- The project is functional, with acceptable tolerances.
- The evaluation considers the project's suitability and identifies considerations for future projects.

For example: The candidate constructs a large bespoke chicken house, marking out and processing components correctly, but some misalignments occur during assembly. The materials are marked out and cut correctly with slight variances, within acceptable tolerances. The coop meets the basic requirements for space and ventilation, although some corners of the frame were not as tight as expected. The finishing, including painting and

sealing, was done but had minor inconsistencies, particularly around joints. The evaluation discussed these imperfections, suggesting improvements in weather resistance and a requirement for precise cutting for future projects.

Kaiaka | Merit

The candidate efficiently creates and evaluates a BCATS project. The project components are accurately marked out and processed, and the finishing processes are executed with attention to detail. The evaluation provides details on the suitability of the finished product for its intended purpose, along with detailed considerations for future projects.

Indicators for Merit:

- Project components are clearly identified.
- Materials are marked out correctly with efficient use of materials and acceptable tolerances
- Tasks are completed efficiently, with good attention to detail.
- Project is assembled with a focus on functionality and quality.
- Evaluation includes recommendations for improvements based on detailed analysis.

For example: The candidate is involved in constructing a relocatable sleepout, marking and preparing all components accurately, ensuring that each part aligns with the project's specifications. The framework is carefully assembled, with measurements taken for material components required ensuring that all parts fit together within acceptable tolerances. The exterior walls are cladded using weather-resistant materials, and the candidate applies sealing techniques to the edges and joints, ensuring the structure is fully weather-tight. The assembly is completed with minimal errors, meeting all design specifications, providing a functional, portable living space that can be easily relocated. The evaluation discusses the project's suitability for relocation, noting that the structure is lightweight yet sturdy, making it easy to move without compromising on durability. The candidate suggests improvements, such as incorporating better insulation materials and using stronger exterior cladding to increase durability.

Kairangi | Excellence

The candidate skilfully creates and evaluates a BCATS project. The project components are marked out, processed, and finished to a high standard working consistently to specified tolerances. The evaluation includes a comprehensive analysis of the suitability of the finished product for its intended purpose alongside insightful considerations for future projects.

Indicators for Excellence:

- Project components are precisely marked out and processed to optimise materials.
- Tasks are completed with precision, demonstrating mastery of techniques.
- Finished project meets a high standard of quality, working to accurate tolerances.
- Evaluation is insightful, providing justified recommendations for future improvements.

For example: The candidate is working as part of a group to modify a trailer for a teardrop caravan. They ensure that each component is marked out carefully to meet the design specifications. The materials are selected with careful consideration for their durability and aesthetic appeal, with marine-grade plywood used for the exterior, chosen for its strength and

resistance to the elements. Advanced construction techniques include the alignment of the roof with the teardrop-shaped sides, ensuring seamless integration and structural integrity. The structure is assembled with great attention to detail, with each joint fitted with battens for weather tightness. The plywood is then sealed to provide a smooth, protective finish. The evaluation thoroughly discusses the caravan's suitability for travel, including its ability to handle various weather conditions, comfort as a mobile living space, and its ease of manoeuvrability. Recommendations include improving weight distribution, such as the use of lighter materials for internal structures and enhancing insulation for better climate control.

APPENDIX A. NCZ IN BUILDING, CONSTRUCTION, AND ALLIED TRADES SKILLS (LEVEL 1) [REF: 3843]

SKILL STANDARDS MAPPED TO GRADUATE PROFILE OUTCOMES

		GPO	1	2	3	4
		Credits	**5**	**5**	**20**	**10**
40540	Use safety practices for a BCATS project or related tasks		✓			
40541	Use materials for a basic BCATS project or related tasks			✓		
40542	Use hand tools for a BCATS project or related tasks					✓
40543	Use basic power tools for a BCATS project or related tasks					✓
40544	Carry out construction processes for a BCATS project or related tasks		✓		✓	
40545	Use hardware and fastenings for a BCATS project or related tasks				✓	
40546	Create joints for a BCATS project or related tasks				✓	
40547	Apply basic measurement and calculations to a BCATS project or related tasks				✓	
40548	Use trade language to progress a BCATS project or related tasks				✓	

REPLACEMENT SKILL STANDARDS

The following replacement relationships are stated in the following Level 1 BCATS skill standards. The unit standards expire 31 December 2027.

UNIT STANDARD		REPLACEMENT SKILL STANDARD	
24352	Demonstrate and apply knowledge of safe working practices and use PPE during the construction of a BCATS project	**40540**	Use safety practices for a BCATS project or related tasks
24360	Demonstrate knowledge of timber and other construction materials used in BCATS projects	**40541**	Use materials for a basic BCATS project or related tasks
12927	Demonstrate knowledge of, select, maintain, and use hand tools for BCATS projects	**40542**	Use hand tools for a BCATS project or related tasks
24356	Apply elementary procedures and processes for a BCATS project	**40544**	Carry out construction processes for a BCATS project or related tasks
25919	Use hardware and fastenings for a BCATS project	**40545**	Use hardware and fastenings for a BCATS project or related tasks
25920	Use joints for a BCATS project	**40546**	Create joints for a BCATS project or related tasks
31512	Demonstrate knowledge of BCATS trades involved in the construction of a residential building	**40549**	Identify BCATS trades involved in the construction of a residential building
31813	Complete basic concrete works as a BCATS project	**40550**	Carry out basic concrete placement as a BCATS project

APPENDIX B. NZC IN BUILDING, CONSTRUCTION, AND ALLIED TRADES SKILLS (LEVEL 2) [REF: 3844]

SKILL STANDARDS MAPPED TO GRADUATE PROFILE OUTCOMES

		GPO	1	2	3	4
		Credits	**5**	**15**	**20**	**5**
40551	Apply controls to maintain a safe BCATS environment		✓			
40552	Use materials for a BCATS project			✓		
40553	Use power tools for a BCATS project			✓		
40554	Use fixed machinery for a BCATS project		*	*	*	*
40555	Measure and calculate to solve problems for a BCATS project				✓	
40556	Create sketches and drawings for a BCATS project				✓	
40557	Interpret and use trade information to progress a BCATS project				✓	
40558	Plan and monitor the completion of a BCATS project				✓	
40559	Identify employment opportunities in BCATS industries					✓
40560	Construct timber furniture as a BCATS project		*	*	*	*
40561	Complete concrete work as a BCATS project		*	*	*	*
40562	Construct a timber deck as a BCATS project		*	*	*	*
40563	Construct a utility building as a BCATS project		*	*	*	*
40564	Lay pavers as a BCATS project		*	*	*	*
40565	Construct a retaining wall as a BCATS project		*	*	*	*
40566	Construct a cupboard with a drawer as a BCATS project		*	*	*	*
40567	Construct a timber fence as a BCATS project		*	*	*	*
40568	Apply trade skills to complete a BCATS project		*	*	*	*

N.B. * - select two of these elective skill standards

Relationship between Elective skill standards and Graduate Profile Outcomes		
GPO		How elective standards contribute to outcomes
1	Apply safe work practices in a BCATS environment.	Development and application of safety skills as projects progress.
2	Use materials, tools, and fixed or portable machinery to complete a BCATS project.	Use of materials, tools and equipment to develop construction techniques.
3	Plan, communicate and progress the completion of a BCATS project.	Application of planning, communication and monitoring skills to set and progress project tasks.
4	Identify the requirements and responsibilities of BCATS industries.	Develop understanding of related BCATS industries through undertaking the projects.

REPLACEMENT SKILL STANDARDS

The following replacement relationships are stated in the following Level 3 BCATS skill standards. The unit standards expire 31 December 2027.

UNIT STANDARD		REPLACEMENT SKILL STANDARD	
12932	Construct timber garden furniture as BCATS projects	**40560**	Construct timber furniture as a BCATS project
12933	Complete minor concrete works as a BCATS project	**40561**	Complete concrete work as a BCATS project
12935	Construct a spaced residential timber deck up to one metre high as a BCATS project	**40562**	Construct a timber deck as a BCATS project
12936	Construct a non-consent timber framed utility building as a BCATS project	**40563**	Construct a utility building as a BCATS project
12938	Lay paving blocks as a BCATS project	**40564**	Lay pavers as a BCATS project
12939	Construct a basic retaining wall as a BCATS project	**40565**	Construct a retaining wall as a BCATS project
22607	Read and interpret plans, working drawings and specifications for BCATS projects	No direct replacement	
24350	Identify, select, use and maintain portable power tools for BCATS projects	**40553**	Use power tools for a BCATS project
24351	Demonstrate knowledge of and use fixed machinery in the construction of BCATS projects	**40554**	Use fixed machinery for a BCATS project
24353	Demonstrate knowledge of and create sketches and drawings for BCATS projects	**40556**	Create sketches and drawings for a BCATS project
24354	Demonstrate knowledge of health and safety legislation and apply safe working practices in a BCATS environment	**40551**	Apply controls to maintain a safe BCATS environment
24355	Demonstrate knowledge of construction and manufacturing materials used in BCATS projects	**40541**	Select and use materials for a BCATS project
24357	Receive instructions and communicate information in relation to BCATS projects	**40557**	Interpret and use trade information to progress a BCATS project
24358	Plan and monitor the construction of a BCATS project, and quality check the product	**40558**	Plan and monitor the completion of a BCATS project
24361	Apply mathematical processes to BCATS projects	**40555**	Measure and calculate to solve problems for a BCATS project
25921	Make a cupboard with a drawer as a BCATS project	**40566**	Construct a cupboard with a drawer as a BCATS project
31511	Demonstrate knowledge of BCATS industries	**40559**	Identify employment opportunities in BCATS industries
31812	Complete a BCATS project	**40568**	Apply trade skills to complete a BCATS project
31860	Construct and perform routine maintenance on a basic residential timber fence as a BCATS project	**40567**	Construct a timber fence as a BCATS project

APPENDIX C. NZC IN BUILDING, CONSTRUCTION, AND ALLIED TRADES SKILLS (LEVEL 3) [REF: 3845]

SKILL STANDARDS MAPPED TO GRADUATE PROFILE OUTCOMES

		GPO	1	2	3
		Credits	**5**	**10**	**25**
40569	Contribute to a healthy and safe BCATS environment		✓		
40570	Work with materials for a BCATS project			✓	
40571	Manage the use of tools, equipment, and machinery for a BCATS project			✓	
40572	Apply mathematical processes to a BCATS project				✓
40573	Respond to the BCATS environment to work with others				✓
40575	Incorporate other parties into a BCATS project schedule				✓
40574	Plan and monitor the stages of a BCATS project				✓
40576	Create and evaluate a BCATS project				✓

REPLACEMENT SKILL STANDARDS

The following replacement relationships are stated in the following Level 3 BCATS skill standards. The unit standards expire 31 December 2027.

UNIT STANDARD		REPLACEMENT SKILL STANDARD	
29677	Follow safe workplace practices, and contribute to a health and safety culture, in a BCATS environment	**40569**	Contribute to a healthy and safe BCATS environment
29678	Demonstrate knowledge of, select, and use materials for a Stage 3 BCATS project	**40570**	Select and use materials for a BCATS project
29679	Develop and use BCATS project documentation for a Stage 3 BCATS project	No direct replacement	
29680	Communicate and work collaboratively in a Stage 3 BCATS project	**40573**	Respond to the BCATS environment to work with others
29681	Measure and calculate for a Stage 3 BCATS project	**40572**	Apply mathematical processes to a BCATS project
29682	Select, use, and maintain tools, equipment and machinery for a Stage 3 BCATS project	**40571**	Manage the use of tools, equipment, and machinery for a BCATS project
29683	Incorporate other building, construction and allied trades into a Stage 3 BCATS project schedule	**40575**	Incorporate other parties into a BCATS project schedule
29684	Undertake a Stage 3 BCATS project	**40576**	Create and evaluate a BCATS project

APPENDIX D. STANDARD EXCLUSION LIST

This Exclusion List was developed to prevent the use of credits from standards that recognise similar outcomes to be used together in the same programme or course of study.

In addition, unit standards that have been designated expiring cannot be used in the same programme or course of study as the new replaced skill standards.

40541	Use materials for a basic BCATS project or related tasks	**40286**	Select and use common materials for construction tasks
40551	Apply controls to maintain a safe BCATS environment	**40299**	Implement practices to maintain a healthy and safe construction environment
40553	Use power tools for a BCATS project	**40310**	Use and store hand and power tools for construction tasks
40555	Measure and calculate to solve problems for a BCATS project	**40294**	Interpret measurements in a construction environment
40557	Interpret and use trade information to progress a BCATS project	**40289**	Use and respond to trade language to progress construction tasks
40560*	Construct timber furniture as a BCATS project	**40568***	Apply trade skills to complete a BCATS project
40561*	Complete concrete work as a BCATS project		
40562*	Construct a timber deck as a BCATS project		
40563*	Construct a utility building as a BCATS project		
40564*	Lay pavers as a BCATS project		
40565*	Construct a retaining wall as a BCATS project		
40566*	Construct a cupboard with a drawer as a BCATS project		
40567*	Construct a timber fence as a BCATS project		
40568	Apply trade skills to complete a BCATS project	**40560 – 40567**	Project-specific BCATS standards
40558	Plan and monitor the completion of a BCATS project	**40304**	Plan own tasks to fit within a construction work programme
40569	Contribute to a healthy and safe BCATS environment	**40287**	Contribute to a healthy and safe team in a construction environment
40570	Work with materials for a BCATS project	**40301** Or **40286**	Work with timber materials for construction tasks Select and use common materials for construction tasks
40573	Respond to the BCATS environment to work with others	**40290**	Respond to the construction environment when interacting with others
40572	Apply mathematical processes to a BCATS project	**40295**	Problem-solve using calculations in a construction environment
40571	Manage the use of tools, equipment, and machinery for a BCATS project	**40311**	Manage tool and equipment use in a construction environment

*A single project cannot be used to award multiple 'project' skill standards. For example, the construction of a timber deck cannot be used to award both 40562 and 40568. Multiple 'project' standards can be used in the same programme or course of study where the projects completed are different.

APPENDIX E. SKILL STANDARD EXEMPTION

The following tables of exemptions will support ākonga to transition into further training in building, construction and allied trades skills where the programmes use the suite of core construction standards published in 2024.

Exemptions process

Exemptions should be specified in programmes that leads toward a qualification when it is submitted to the WDC for programme endorsement and to NZQA for programme approval.

If a provider considers that the exempts stated are no longer valid or there are exemptions that are missing, they should contact moderation@waihangaararau.nz in the first instance to get approval for changes.

BCATS SKILL STANDARD CREDIT FOR	EXEMPT FROM SKILL STANDARD
40551 Apply controls to maintain a safe BCATS environment (Level 2, 4 credits) Or **40569** Contribute to a healthy and safe BCATS environment (Level 3, 5 credits)	**40299** Implement practices to maintain a healthy and safe construction environment (Level 2, 3 credits)
40552 Use materials for a BCATS project (Level 2, 5 credits) Or **40570** Select and use materials for a BCATS project (level 3 5 credits)	**40286** Select and use common materials for construction tasks (Level 2, 8 credits)
40553 Use power tools for a BCATS project (Level 2, 5 credits)	**40310** Use and store hand and power tools for construction tasks (Level 2, 2 credits)
40555 Measure and calculate to solve problems for a BCATS project (Level 2, 3 credits)	**40294** Interpret measurements in a construction environment (Level 2, 2 credits)
40557 Interpret and use trade information to progress a BCATS project (Level 2, 4 credits)	**40289** Use and respond to trade language to progress construction tasks (Level 2, 2 credits)
40571 Manage the use of tools, equipment, and machinery for a BCATS project (Level 3, 5 credits)	**40311** Manage tool and equipment use in a construction environment (Level 3, 3 credits)
40572 Apply mathematical processes to a BCATS project (Level 3, 5 credits)	**40295** Problem-solve using calculations in a construction environment (Level 3, 3 credits)
40574 Plan and monitor stages of a BCATS project (Level 3, 5 credits)	**40297** Interpret information from plans and documentation for construction tasks (Level 3, 3 credits)

APPENDIX F. ALL BCATS SKILL STANDARDS

LEVEL 1 SKILL STANDARDS

ID NUMBER	TITLE	CREDITS
40540	Use safety practices for a BCATS project or related tasks	4
40541	Use materials for a basic BCATS project or related tasks	5
40542	Use hand tools for a BCATS project or related tasks	5
40543	Use basic power tools for a BCATS project or related tasks	5
40544	Carry out construction processes for a BCATS project or related tasks	8
40545	Use hardware and fastenings for a BCATS project or related tasks	2
40546	Create joints for a BCATS project or related tasks	4
40547	Apply basic measurement and calculations to a BCATS project or related tasks	3
40548	Use trade language to progress a BCATS project or related tasks	4
40549	Identify BCATS trades involved in the construction of a residential building	3
40550	Carry out basic concrete placement as a BCATS project	4

LEVEL 2 SKILL STANDARDS

ID NUMBER	TITLE	CREDITS
40551	Apply controls to maintain a safe BCATS environment	4
40552	Use materials for a BCATS project	5
40553	Use power tools for a BCATS project	5
40554	Use fixed machinery for a BCATS project	5
40555	Measure and calculate to solve problems for a BCATS project	3
40556	Create sketches and drawings for a BCATS project	5
40557	Interpret and use trade information to progress a BCATS project	4
40558	Plan and monitor the completion of a BCATS project	5
40559	Identify employment opportunities in BCATS industries	4
40560	Construct timber furniture as a BCATS project	6
40561	Complete concrete work as a BCATS project	4

40562	Construct a timber deck as a BCATS project	6
40563	Construct a utility building as a BCATS project	6
40564	Lay pavers as a BCATS project	4
40565	Construct a retaining wall as a BCATS project	4
40566	Construct a cupboard with a drawer as a BCATS project	6
40567	Construct a timber fence as a BCATS project	4
40568	Apply trade skills to complete a BCATS project	6

LEVEL 3 SKILL STANDARDS

ID NUMBER	TITLE	CREDITS
40569	Contribute to a healthy and safe BCATS environment	5
40570	Work with materials for a BCATS project	5
40571	Manage the use of tools, equipment, and machinery for a BCATS project	5
40572	Apply mathematical processes to a BCATS project	5
40573	Respond to the BCATS environment to work with others	5
40574	Plan and monitor stages of a BCATS project	5
40575	Incorporate other parties into a BCATS project schedule	2
40576	Create and evaluate a BCATS project	8