## **National Certificate in Concrete Construction (Level 4)**

Level 4

Credits 203

This qualification has been **reviewed**. The last date to meet the requirements is 31 December 2023.

## **Transition Arrangements**

This qualification was republished in December 2021 to extend the last date for entry to programmes from 31 December 2021 to 30 June 2022. The last date for assessment has been extended from 31 December 2022 to 31 December 2023, when it will be discontinued.

This qualification has been replaced by the New Zealand Certificate in Concrete Construction (Commercial and Civil Infrastructure) (Level 4) with optional strands in Premanufactured Elements, and Post-tensioned Concrete [Ref: 4188].

People currently working towards this qualification must either complete the requirements by 31 December 2023 or transfer to the replacement New Zealand qualification.

For detailed information see Review Summaries on the NZQA website.

This qualification contains standards that replace earlier standards. For the purposes of this qualification, people who have gained credit for the expiring standards are exempt from the requirement to gain credit for the replacement standards – see table below.

| Credit for | Exempt from  |
|------------|--------------|
| 6400       | 26551, 26552 |
| 6401       | 26552        |
| 6402       | 26551        |
| 8492       | 26627        |
| 24378      | 26627        |

It is not intended that anyone is disadvantaged by this review. However, anyone who feels they have been disadvantaged may appeal to the Building and Construction Industry Training Organisation at the address below.

For detailed information see Review Summaries on the NZQA website.

# **NZQF National Qualification Registration Information**

| Process      | Version | Date             | Last Date for Assessment |
|--------------|---------|------------------|--------------------------|
| Registration | 1       | 18 March 2011    | 31 December 2020         |
| Review       | 2       | 24 January 2019  | 31 December 2021         |
| Republished  | 2       | 28 November 2019 | 31 December 2021         |
| Republished  | 2       | 26 November 2020 | 31 December 2021         |
| Republished  | 2       | 24 June 2021     | 31 December 2022         |
| Republished  | 2       | 16 December 2021 | 31 December 2023         |

# **Standard Setting Body**

Waihanga Ara Rau Workforce Development Council PO Box 445 Wellington 6140

Telephone 04 909 0174

Email Qualifications@waihanga.nz

Website www.waihanga.nz

#### National Certificate in Concrete Construction (Level 4)

Level 4

Credits 203

#### **Purpose**

The National Certificate in Concrete Construction (Level 4) [Ref: 1634] is designed for people who want to work in the concrete construction industry as concrete constructors. It also provides a means of recognising current competence for those already working in the industry.

People who are awarded this qualification have broad knowledge and skills in all aspects of concrete construction.

The qualification includes a Compulsory section which recognises the core skills and knowledge required by industry for concrete construction workers. These skills and knowledge relate to first aid; health and safety; maintaining plant and equipment; lifting systems; standards and codes of practice; environmental management; site preparation and preliminary work; reading plans; building setout; footings and foundations; erection of precast concrete units; scaffolding, falsework, and formwork for concrete; suspended concrete floors; transportation, placement, and curing of fresh concrete; measurement; creation of concrete joints; and remedial work in concrete.

The Elective section includes standards which cover ordering materials, testing fresh concrete, use of moulds, crane operation, working at heights, working in confined spaces, and elevating work platforms; as well as more in-depth knowledge and skills in site preparation and setout, scaffolds, and lifting systems. This allows for some flexibility in obtaining the knowledge and practical skills required of competent concrete constructors depending on the type of construction work available to candidates while completing the qualification.

The qualification builds on the underpinning knowledge and skills provided by the National Certificate in Concrete Core Skills (Level 2) [Ref: 1452], and shares standards in common with other qualifications in the Concrete subfield at Level 3 and above, allowing transferable skills to be recognised between the different sectors of the concrete industry. In addition, the qualification shares standards in common with the National Certificate in Carpentry (Level 4) [Ref: 0016].

## **Replacement Information**

This qualification, the National Certificate in Precast Concrete (Level 3) with strands in Structural Precast, Prestressing, Precast Tank, and Traditional Tank [Ref: 1635], and the National Certificate in Concrete Construction (Placing and Finishing) (Level 3) [Ref: 1633] replaced the National Certificate in Concrete Construction with strands in Sitework, Precast Concrete, and Placing and Finishing [Ref: 0732].

#### **Special Notes**

- 1 It is expected that candidates for this qualification will have an existing basic knowledge of concrete industry practices. Consequently, standards 24879, 24880, 24881, 24882 and 24883, or the demonstration of equivalent knowledge and skills, are a prerequisite for entry to this qualification.
- 2 Due to the health and safety requirements of the sites in which these trade skills are applied, people entering programmes of education and training leading to the award of this qualification must demonstrate the capacity to understand any and all requirements, instructions, and communications (oral, written and graphic), to the required industry level. This might be evidenced by standards or achievement standards from the *Communication Skills* and *English* subfields at Level 2 or above, or the demonstration of equivalent knowledge and skills.
- 3 Recognition of current competence acknowledges the skills and knowledge gained from work and experience, or from courses or study undertaken. Assessment of recognition of current competence may be conducted by an assessor appointed by the Building and Construction Industry Training Organisation, or an accredited provider.

Application for recognition of current competence may be initiated by contacting the Building and Construction Industry Training Organisation.

**Credit Range** 

|                 | Compulsory | Elective |
|-----------------|------------|----------|
| Level 1 credits | 1          | -        |
| Level 2 credits | 23         | -        |
| Level 3 credits | 96         | 22-29    |
| Level 4 credits | 54         | 0-8      |
| Minimum totals  | 174        | 29       |

# Requirements for Award of Qualification

#### **Award of NZQF National Qualifications**

Credit gained for a standard may be used only once to meet the requirements of this qualification.

Unit standards and achievement standards that are equivalent in outcome are mutually exclusive for the purpose of award. The table of mutually exclusive standards is provided on the New Zealand Qualifications Authority (NZQA) website: <a href="http://www.nzqa.govt.nz/qualifications-standards/standards/standards-exclusion-list/">http://www.nzqa.govt.nz/qualifications-standards/standards-exclusion-list/</a>.

Reviewed standards that continue to recognise the same overall outcome are registered as new versions and retain their identification number (ID). Any version of a standard with the same ID may be used to meet qualification requirements that list the ID and/or that specify the past or current classification of the standard.

## **Summary of Requirements**

- Compulsory standards
- Elective A minimum of 30 credits as specified

## **Detailed Requirements**

#### Compulsory

The following standards are required

Core Generic > Core Generic > Work and Study Skills

| ID    | Title                         | Le | vel | Credit |
|-------|-------------------------------|----|-----|--------|
| 24378 | Perform building calculations | 3  |     | 4      |

Health > Health Studies > First Aid

| ID    | Title   | Level | Credit |
|-------|---|-------|--------|
| 26551 | Provide first aid for life threatening conditions                               | 2     | 1      |
| 26552 | Demonstrate knowledge of common first aid conditions and how to respond to them | 2     | 1      |

Planning and Construction > Concrete > Concrete Construction

| ID    | Title   | Level | Credit |
|-------|---|-------|--------|
| 12027 | Fix reinforcing steel for concrete construction on site                   | 3     | 5      |
| 12041 | Coordinate delivery of and erect precast concrete units on site           | 3     | 8      |
| 26048 | Place and finish concrete for concrete construction on site               | 3     | 15     |
| 26049 | Demonstrate knowledge of and create concrete joints                       | 3     | 4      |
| 26376 | Describe the delivery coordination and erection of precast concrete units | 3     | 6      |

Planning and Construction > Concrete > Concrete Core Skills

| ID    | Title   | Level | Credit |
|-------|---|-------|--------|
| 26050 | Demonstrate knowledge of transporting fresh concrete, and transport fresh concrete in own workplace | 2     | 3      |
| 26051 | Demonstrate knowledge, and carry out curing, of concrete  | 2     | 8      |
| 26052 | Demonstrate knowledge of defects and carry out remedial work on concrete                            | 3     | 15     |
| 26057 | Read and interpret concrete industry drawings and specifications                                    | 2     | 3      |

| ID    | Title  | Level | Credit |
|-------|--|-------|--------|
| 26058 | Demonstrate knowledge of environmental management within the concrete industry           | 3     | 5      |
| 26059 | Demonstrate knowledge of concrete industry standards and codes of practice               | 2     | 2      |
| 26060 | Demonstrate knowledge of, safely use, and maintain concrete industry plant and equipment | 2     | 6      |

Planning and Construction > Concrete > Precast Concrete

| ID    | Title  | Level | Credit |
|-------|--|-------|--------|
| 26071 | Demonstrate knowledge of lifting systems for precast concrete elements | 3     | 4      |

Planning and Construction > Construction Trades > Carpentry

| ID    | Title   | Level | Credit |
|-------|---|-------|--------|
| 13041 | Set out buildings on site   | 4     | 7      |
| 13042 | Set up levelling equipment and take levels on construction sites                | 4     | 5      |
| 13043 | Excavate and prepare for footings and slab on ground on site                    | 3     | 8      |
| 13045 | Construct formwork for footings, foundations and walls up to 1.2 metres on site | 3     | 12     |
| 13065 | Construct in situ high wall, column and beam falsework and formwork on site     | 4     | 16     |
| 18728 | Set up, place and fix proprietary suspended concrete floor systems on site      | 4     | 12     |

Planning and Construction > Construction Trades > Carpentry Theory

| ID    | Title  | Level | Credit |
|-------|--|-------|--------|
| 13004 | Demonstrate knowledge of setting out a building  | 4     | 3      |
| 13006 | Demonstrate knowledge of preparation for footings and slab on ground construction                  | 4     | 2      |
| 13008 | Demonstrate knowledge of formwork for footings, foundations, beams and walls up to 1.2 metres      | 3     | 4      |
| 13009 | Demonstrate knowledge of fabrication and placing of reinforcing steel and steel mesh               | 3     | 1      |
| 13029 | Demonstrate knowledge of erecting in situ high wall, column, beam, and slab falsework and formwork | 4     | 3      |
| 24363 | Demonstrate knowledge of proprietary suspended concrete floor systems                              | 4     | 2      |

Planning and Construction > Construction Trades > Core Construction

| ID    | Title   | Level | Credit |
|-------|---|-------|--------|
| 12997 | Demonstrate knowledge of safe working practices on construction sites | 3     | 3      |
| 13016 | Demonstrate knowledge of timber and metal scaffolds up to five metres | 3     | 2      |
| 13036 | Carry out safe working practices on construction sites                | 4     | 4      |

#### **Elective**

A minimum of 30 credits

Health > Occupational Health and Safety > Occupational Health and Safety Practice

| ID    | Title   | Level | Credit |
|-------|---|-------|--------|
| 17600 | Explain safe work practices for working at heights              | 3     | 3      |
| 18426 | Demonstrate knowledge of hazards associated with confined space | 3     | 4      |

Planning and Construction > Concrete > Concrete Core Skills

| ID    | Title  | Level | Credit |
|-------|--|-------|--------|
| 26053 | Carry out routine tests on fresh concrete  | 3     | 5      |
| 26056 | Demonstrate knowledge of the preparation of orders for materials and products in the concrete industry | 3     | 3      |

Planning and Construction > Concrete > Precast Concrete

| ID    | Title  | Level | Credit |
|-------|--|-------|--------|
| 26070 | Assemble and service moulds, and demould products for precast concrete product manufacture | 3     | 8      |
| 26073 | Use lifting systems for precast concrete elements  | 3     | 4      |

Planning and Construction > Construction Trades > Carpentry

| ID    | Title  | Level | Credit |
|-------|--|-------|--------|
| 13040 | Carry out preliminary work and site establishment on a | 4     | 3      |
|       | construction site                                      |       |        |

Planning and Construction > Construction Trades > Carpentry Theory

| ID    | Title   | Level | Credit |
|-------|---|-------|--------|
| 13005 | Demonstrate knowledge of spot levels and contour plans            | 4     | 3      |
| 24379 | Demonstrate knowledge of preliminary work needed for construction | 4     | 2      |

Planning and Construction > Construction Trades > Core Construction

| ID    | Title                                     | Level | Credit |
|-------|---|-------|--------|
| 13053 | Erect scaffolds up to five metres on site | 3     | 4      |

Service Sector > Cranes > Crane Operation

| ID   | Title  | Level | Credit |
|------|--|-------|--------|
| 3789 | Sling regular loads and communicate during crane | 3     | 22     |
|      | operations                                       |       |        |

Service Sector > Cranes > Power-operated Elevating Work Platforms

| ID    | Title   | Level | Credit |
|-------|---|-------|--------|
| 23960 | Assess the worksite, prepare and operate a scissor lift elevating work platform (EWP)         | 3     | 3      |
| 23966 | Describe types of elevating work platforms (EWPs), and legislative requirements for their use | 3     | 2      |

## **Standard Setting Body**

Building and Construction Industry Training Organisation PO Box 2615
Wellington 6140

Telephone 04 381 6430

Email <u>national.office@bcito.org.nz</u>
Website <u>http://www.bcito.org.nz</u>

#### **Planned Review**

Any person or organisation may contribute to the review of this qualification by sending feedback to the standard setting body at the above address.

| Next Review | 2015 |
|-------------|------|
|             |      |

# Other standard setting bodies whose standards are included in the qualification

NZQA

Primary Industry Training Organisation The Skills Organisation

#### Certification

This certificate will display the logos of NZQA, the Building and Construction Industry Training Organisation, and the organisation that has been granted consent to assess against standards that meet the requirements of the qualification (accredited).

#### Classification

This qualification is classified according to the classification system listed on the Directory of Assessment Standards (DAS) and the New Zealand Standard Classification of Education (NZSCED) system as specified below.

| DAS Classification |  | NZSCED |  |
|--------------------|--|--------|--|
| Code               | Description  | Code   | Description  |
| 2098               | Planning and Construction > Concrete > Concrete Construction | 040399 | Architecture and Building > Building > Building not elsewhere classified |

#### **Quality Management Systems**

Providers and Industry Training Organisations must be granted consent to assess by a recognised Quality Assurance Body before they can register credits from assessment against standards. Accredited providers and Industry Training Organisations assessing against standards must engage with the moderation system that applies to those standards. Accreditation requirements and the moderation system are outlined in the associated Consent and Moderation Requirements (CMR) for each standard.



# **Prerequisite Diagram**



Level 3

