

## Field Planning and Construction

### Review of *Concrete* and *Construction Trades* unit standards

Subfield	Domain	ID
Concrete	Concrete Construction	12027, 12042, 18514, 18515, 26049, 26374, 26375, 26377-26379, 26822, 26828
	Concrete Core Skills	24881-24883, 26050, 26054-26062
	Concrete Product Manufacture	26041-26047, 26064-26069, 27192, 27193
	Concrete Technology	12022, 18340, 18341, 18345, 18346, 18348
	Precast Concrete	12017, 12024, 12029, 26071-26073, 26520-26525, 27179-27182
Construction Trades	Concrete Construction	12026, 12032
	Concrete Production	12016, 12018

The BCITO has completed the review of the unit standards listed above.

**Date new versions published**

**October 2021**

**Planned review date**

**December 2026**

#### Summary

Unit standards related to formwork, reinforcing, concrete placing, specified concrete finishes, precast concrete element manufacture, concrete product manufacture and sawing and drilling concrete were reviewed alongside a review of Concrete qualifications.

The review resulted in the expiry of a number of unit standards that are no longer in use or are no longer fit for purpose. Thirty one new standards were developed that reflect the current requirements of these roles and meet the graduate outcomes of the New Zealand Certificate in Concrete Construction Skills (Level 3) with strands in Formwork, Reinforcing, Placing and Finishing, Specified Concrete Finishes, Concrete Product Manufacture, Concrete Sawing and Drilling, and Precast Concrete Manufacture [Ref: 4189].

#### Main changes

- Three *Concrete Construction* unit standards were designated expiring and replaced with three new unit standards.
- 63 unit standards were designated expiring because they were no longer required by industry.
- 27 new unit standards were developed to meet industry requirements.

**Category C and D unit standards will expire at the end of December 2023**

#### Impact on existing organisations with consent to assess

Current consent for			Consent extended to		
Nature of consent	Classification or ID	Level	Nature of consent	Classification or ID	Level
Standard	12027	3	Standard	32667	3

<b>Key to review category</b>	
<b>A</b>	Dates changed, but no other changes are made - the new version of the standard carries the same ID and a new version number
<b>B</b>	Changes made, but the overall outcome remains the same - the new version of the standard carries the same ID and a new version number
<b>C</b>	Major changes that necessitate the registration of a replacement standard with a new ID
<b>D</b>	Standard will expire and not be replaced

Planning and Construction > Concrete > Concrete Construction

<b>ID</b>	<b>Title</b>	<b>Level</b>	<b>Credit</b>	<b>Review Category</b>
12027 <b>32667</b>	Fix reinforcing steel for concrete construction on site <b>Fix reinforcing into formwork for concrete structures in-situ</b>	3 <b>3</b>	5 <b>10</b>	C
12042 26828 <b>32688</b> <b>32689</b>	Cut and drill concrete for concrete construction on site Perform hand-held sawing of concrete on site <b>Saw concrete using hand-held power tools</b> <b>Drill concrete using hand-held power tools</b>	3 3 <b>3</b> <b>3</b>	15 8 <b>5</b> <b>5</b>	C C
18514	Place and finish imprint concrete for concrete construction on site	3	8	D
18515	Place and finish stencilled concrete for concrete construction on site	3	6	D
26049	Demonstrate knowledge of and create concrete joints	3	4	D
26374	Place and finish integrally coloured concrete for concrete construction on site	3	6	D
26375	Apply decorative finishes to hardened concrete on site	3	8	D
26377	Place and finish dryshake toppings to concrete flatwork for concrete construction on site	3	6	D
26378	Place and finish super flat concrete floors for concrete construction on site	3	8	D
26379	Survey the flatness of concrete floors for concrete construction on site	4	8	D
26822	Demonstrate knowledge of the process for anchoring concrete sawing and drilling equipment	2	2	D
<b>32660</b>	<b>Maintain tools, plant and equipment used to construct formwork for concrete structures and foundations</b>	<b>3</b>	<b>5</b>	<b>New</b>
<b>32661</b>	<b>Demonstrate knowledge of materials used to construct formwork for concrete structures and foundations</b>	<b>3</b>	<b>5</b>	<b>New</b>
<b>32663</b>	<b>Fabricate, assemble and dismantle formwork for concrete structures and foundations</b>	<b>3</b>	<b>10</b>	<b>New</b>
<b>32664</b>	<b>Maintain tools, plant and equipment used to fix reinforcing for concrete structures</b>	<b>3</b>	<b>5</b>	<b>New</b>
<b>32665</b>	<b>Handle and store reinforcing steel and materials used for concrete construction</b>	<b>3</b>	<b>5</b>	<b>New</b>
<b>32668</b>	<b>Use tools, plant and equipment to place and finish concrete</b>	<b>3</b>	<b>3</b>	<b>New</b>
<b>32669</b>	<b>Demonstrate knowledge of fresh concrete for concrete placing and finishing</b>	<b>3</b>	<b>2</b>	<b>New</b>
<b>32670</b>	<b>Demonstrate knowledge of materials used in conjunction with concrete</b>	<b>3</b>	<b>2</b>	<b>New</b>
<b>32672</b>	<b>Place concrete for flatwork and structural concrete elements</b>	<b>3</b>	<b>4</b>	<b>New</b>
<b>32673</b>	<b>Finish concrete flatwork and off-form surfaces</b>	<b>3</b>	<b>4</b>	<b>New</b>

ID	Title	Level	Credit	Review Category
32674	<b>Maintain tools, plant and equipment used to form specified finishes on concrete</b>	3	5	New
32676	<b>Form specified finishes on concrete</b>	3	10	New
32687	<b>Inspect and maintain hand-held tools and equipment used for concrete sawing and drilling</b>	3	3	New

Planning and Construction > Concrete > Concrete Core Skills

ID	Title	Level	Credit	Review Category
24881	Demonstrate knowledge of portable power tools as used in concrete work	2	3	D
24882	Demonstrate knowledge of quality assurance requirements in concrete industry work	2	3	D
24883	Demonstrate knowledge of routine methods of testing concrete	2	3	D
26050	Demonstrate knowledge of transporting fresh concrete, and transport fresh concrete in own workplace	2	3	D
26054	Perform a confined space entry in the concrete industry	3	5	D
26055	Cast concrete cylinders for compression testing	3	2	D
26056	Demonstrate knowledge of the preparation of orders for materials and products in the concrete industry	3	3	D
26057	Read and interpret concrete industry drawings and specifications	2	3	D
26058	Demonstrate knowledge of environmental management within the concrete industry	3	5	D
26059	Demonstrate knowledge of concrete industry standards and codes of practice	2	2	D
26060	Demonstrate knowledge of, safely use, and maintain concrete industry plant and equipment	2	6	D
26061	Prepare to perform concrete industry operations	2	3	D
26062	Describe standard operating procedures in a concrete industry workplace	2	3	D
32656	<b>Apply health and safety, and environmental protection practices in a concrete construction workplace</b>	3	10	New
32657	<b>Apply job documentation to concrete construction</b>	3	5	New
32658	<b>Apply teamwork and communication skills in a concrete construction team</b>	3	10	New
32659	<b>Use measurements and calculations in concrete construction work</b>	3	5	New
32690	<b>Maintain the standards of the concrete construction industry as a concrete construction worker</b>	3	5	New

Planning and Construction > Concrete > Concrete Product Manufacture

ID	Title	Level	Credit	Review Category
26041	Operate a masonry block machine for masonry product manufacture	4	16	D
26042	Demonstrate knowledge of masonry product manufacture	3	8	D
26043	Demonstrate knowledge of, assemble, service and maintain moulds for masonry product manufacture	3	10	D
26044	Palletise finished masonry product	2	2	D

ID	Title	Level	Credit	Review Category
26045	Receive orders and dispatch masonry product	3	4	D
26046	Perform secondary processing for masonry product manufacture	3	4	D
26047	Perform sampling and testing for manufactured masonry products	3	5	D
26064	Demonstrate knowledge of and perform yard duties for a concrete product manufacturing workplace	2	5	D
26065	Demonstrate knowledge of receiving, storing, maintaining and moving materials for concrete product manufacture	3	5	D
26066	Perform quality checks for concrete product manufacture	3	6	D
26067	Fabricate and place reinforcing for concrete product manufacture	3	8	D
26068	Demonstrate knowledge of fabrication and placing of reinforcing for concrete product manufacture	3	6	D
26069	Receive, store and maintain materials for concrete product manufacture	3	6	D
27192	Demonstrate knowledge of concrete pipe manufacture	3	20	D
27193	Fabricate reinforcing cages by machine for concrete pipe manufacture	3	25	D
<b>32677</b>	<b>Demonstrate knowledge of concrete used for the manufacture of concrete products</b>	<b>3</b>	<b>3</b>	<b>New</b>
<b>32678</b>	<b>Operate and maintain machinery, plant and equipment used to manufacture concrete products</b>	<b>3</b>	<b>8</b>	<b>New</b>
<b>32680</b>	<b>Manufacture concrete products</b>	<b>3</b>	<b>8</b>	<b>New</b>
<b>32681</b>	<b>Apply quality checking procedures to concrete product manufacture</b>	<b>3</b>	<b>4</b>	<b>New</b>
<b>32682</b>	<b>Complete post-production processes for manufactured concrete products</b>	<b>3</b>	<b>4</b>	<b>New</b>

Planning and Construction > Concrete > Concrete Technology

ID	Title	Level	Credit	Review Category
12022	Demonstrate knowledge of concrete specialist technology	4	7	D
18340	Test concrete	4	10	D
18341	Design concrete mixes	5	12	D
18345	Demonstrate knowledge of handling, placing and finishing concrete	3	12	D
18346	Demonstrate knowledge of curing methods for concrete construction	3	5	D
18348	Demonstrate knowledge of precast and pre-stressed concrete systems	5	12	D

Planning and Construction > Concrete > Precast Concrete

ID	Title	Level	Credit	Review Category
12017	Coordinate the handling, storage, dispatch and loading of precast concrete units	3	8	D
12024	Place and finish concrete for precasting	3	15	D
12029	Manufacture and fabricate moulds for precast concrete	4	30	D

ID	Title	Level	Credit	Review Category
26071	Demonstrate knowledge of lifting systems for precast concrete elements	3	4	D
26072	Demonstrate knowledge of assembling and servicing moulds, and demoulding, for precast concrete product manufacture	3	8	D
26073	Use lifting systems for precast concrete elements	3	4	D
26520	Manufacture precast concrete stairs	3	25	D
26521	Cut and drill concrete for precast concrete manufacture	3	15	D
26522	Demonstrate knowledge of structural prestressed concrete element manufacture	3	25	D
26523	Demonstrate knowledge of structural precast concrete element manufacture	3	25	D
26524	Manufacture precast concrete beams and columns	3	25	D
26525	Manufacture precast concrete panels	3	25	D
27179	Demonstrate knowledge of precast concrete tank manufacture	3	30	D
27180	Demonstrate knowledge of traditional concrete tank manufacture	3	40	D
27181	Manufacture precast concrete tanks	3	30	D
27182	Manufacture traditional concrete tanks	3	40	D
<b>32683</b>	<b>Complete pre-pour processes for precast concrete manufacture</b>	<b>3</b>	<b>8</b>	<b>New</b>
<b>32684</b>	<b>Place and finish concrete for precast concrete manufacture</b>	<b>3</b>	<b>7</b>	<b>New</b>
<b>32685</b>	<b>Complete post-pour processes for precast concrete manufacture</b>	<b>3</b>	<b>5</b>	<b>New</b>
<b>32855</b>	<b>Operate and maintain machinery, plant and equipment used to manufacture precast concrete elements</b>	<b>3</b>	<b>5</b>	<b>New</b>

Planning and Construction > Construction Trades > Concrete Construction

ID	Title	Level	Credit	Review Category
12026	Detail, cut and bend reinforcing steel for concrete construction	3	5	D
12032	Apply and repair specialist finishes to concrete surfaces	3	14	D

Planning and Construction > Construction Trades > Concrete Production

ID	Title	Level	Credit	Review Category
12016	Produce pre-cast extruded concrete	3	20	D
12018	Carry out glass reinforced concrete pre-cast production operations	3	15	D