

Demonstrate knowledge of defects and carry out remedial work on concrete

Level 3

Credits 15

Purpose People credited with this unit standard are able to: demonstrate knowledge of defects in concrete; carry out remedial work to remedy defects in concrete; and complete work operations.

Subfield Concrete

Domain Concrete Core Skills

Status Registered

Status date 20 November 2009

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Entry information Open.

Replacement information This unit standard replaced unit standard 12034.

Accreditation Evaluation of documentation and visit by NZQA and industry.

Standard setting body (SSB) Building and Construction Industry Training Organisation

Accreditation and Moderation Action Plan (AMAP) reference 0048

This AMAP can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Special notes

1 Definitions

Specifications refer to documented instructions (oral, written, graphic) and may include any of the following: manufacturer's specifications, recommendations or technical data sheets; material specifications; specifications from a specialist source such as an architect, designer, engineer or a supervisor; site or work specific requirements.

Workplace practice refers to the documented procedures specific to a workplace which set out the standard and required practices of that workplace.

- 2 Credit for this unit standard indicates compliance with industry practice. *Industry practice* refers to the ability to demonstrate knowledge and skills that reflect the productivity, uniformity, finish quality, and material economies currently accepted within industry.
- 3 Legislation and publications relevant to this unit standard include:
Health and Safety in Employment Act 1992 and Health and Safety in Employment Regulations 1995;
3109:1997 *Concrete construction* and NZS 3114:1987 *Specification for concrete surface finishes*, available from Standards New Zealand (<http://www.standards.co.nz>).

Elements and performance criteria

Element 1

Demonstrate knowledge of defects in concrete.

Range surface defects, four of – fins, ledges, plastic cracks up to 12mm deep, blowholes, tie holes, colour, grout loss, uncompacted concrete, physical damage, delamination, dominant joints, damaged saw cuts, flatness and levelness outside of tolerances, boniness/honeycombing, chips, steps in seams, edging, bulges;
structural defects, four of – cracks, incorrect fixing positions, major grout loss, incorrect reinforcing cover, concrete thickness, broken or chipped concrete, incorrect penetrations/lifting system installation, incorrect overall dimensions, foreign objects.

Performance criteria

- 1.1 Structural and surface defects are identified and described in accordance with NZS 3109, NZS 3114, or specifications.
- 1.2 Causes and implications of structural and surface defects in concrete are identified.
- 1.3 Methods for eradication, minimisation or rectification of structural and surface defects in concrete are identified and described in accordance with NZS 3109, NZS 3114, specifications, and workplace practice.

Element 2

Carry out remedial work to remedy defects in concrete.

Performance criteria

- 2.1 Remedial work is completed to remedy surface defects in accordance with job specifications, NZS 3109, NZS 3114, and workplace practice.
- Range four of – fins, ledges, plastic cracks up to 12mm deep, blowholes, tie holes, colour, grout loss, uncompacted concrete, physical damage, delamination, dominant joints, damaged saw cuts, flatness and levelness outside of tolerances, boniness/honeycombing, chips, steps in seams, edging, bulges.
- 2.2 Actions taken to remedy structural defects are in accordance with job specifications, NZS 3109, NZS 3114, and workplace practice.
- Range four of – cracks, incorrect fixing positions, major grout loss, incorrect reinforcing cover, concrete thickness, broken or chipped concrete, incorrect penetrations/lifting system installation, incorrect overall dimensions, foreign objects.

Element 3

Complete work operations.

Performance criteria

- 3.1 All operations are safely completed, workplace and equipment are cleaned in accordance with workplace practice and environmental safety requirements, and routine maintenance is carried out in accordance with workplace practice.
- 3.2 Any required documentation is completed in accordance with workplace practice.

Please note

Providers must be accredited by NZQA, or an inter-institutional body with delegated authority for quality assurance, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by NZQA before they can register credits from assessment against unit standards.

Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.

Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact the Building and Construction Industry Training Organisation national.office@bcito.org.nz if you wish to suggest changes to the content of this unit standard.