Title	**Demonstrate knowledge of rainwater handling systems and discharge factors on roofs**		
Level	**3**	**Credits**	**4**

Purpose	This unit standard is intended for use in the training and assessment of people carrying out roof work and covers knowledge of rainwater handling systems and discharge factors on roofs. People credited with this unit standard are able to demonstrate knowledge of: – rainwater handling systems; and – roof surface water discharge factors.

Classification	Plumbing, Gasfitting and Drainlaying > Roofing

Available grade	Achieved

Guidance Information

1 This unit standard has been developed for learning and assessment off-job.

2 References
Construction Contracts Act 2002;
Historic Places Act 1993;
Local Government Act 2002;
Building Act 2004 and associated regulations;
Health and Safety at Work Act 2015;
Resource Management Act 1991;
Acceptable Solutions and Verification Methods for New Zealand Building Code Clause E1 Surface Water and Clause E2 External Moisture;
Licensed Building Practitioner Scheme – Understanding the Regulatory Environment Booklet – available at: http://www.business.govt.nz/lbp/the-board/getting-licensed/applying-for-licensing;
NZS 3604:2011 Timber-framed buildings;
NZS 3902:2004 Housing, alterations and small buildings contract;
NZS 4121:2001, Design for access and mobility: Buildings and associated facilities;
New Zealand Building Code Hand Book – available at: http://www.building.govt.nz/building-code-compliance/building-code-and-handbooks/building-code-handbook;
and all subsequent amendments and replacements.

3 This unit standard applies to both new roof and re-roofing installations.

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4 Range
- a Candidates must refer to current legislation and Standards during assessment.
- b Demonstration of safe working practices are essential components of assessment of this unit standard.
- c All activities and evidence presented for all outcomes and performance criteria in this unit standard must be in accordance with:
  - i legislation;
  - ii policies and procedures;
  - iii ethical codes;
  - iv Standards – may include but are not limited to those cited in the New Zealand Building Code Hand Book;
  - v applicable site, enterprise, and industry practice; and,
  - vi manufacturers' instructions, specifications, and data sheets.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of rainwater handling systems.

Performance criteria

1.1 Describe rainwater handling components and systems.

Range includes but is not limited to – guttering, internal guttering, spouting, attachment systems, rain water head, down pipes overflow, spreader, scupper, expansion joints.

1.2 Describe rainwater handling system materials and finish coatings types in terms of their advantages and disadvantages.

Range materials – plastics, metals; coatings – paint, factory steel colour coating, plain.

1.3 Explain rainwater handling component checks in terms of job specifications.

Outcome 2

Demonstrate knowledge of roof surface water discharge factors.

Performance criteria

2.1 Describe roof surface water discharge options in terms of storm water drainage, water harvesting, gutter size, down pipe size, outfalls, rain water head.

2.2 Describe roof surface water discharge factors in terms of safeguarding people from injury and property from damage.

2.3 Explain the purpose of New Zealand Building Code Acceptable Solution E1 AS1 Surface Water, in terms of its use as a surface water discharge information source.

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2.4 Describe storm water discharge and water harvesting in terms of potable water and legionaries disease.

Planned review date	31 December 2023

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	23 January 2009	31 December 2020
Review	2	16 March 2017	N/A
Rollover	3	25 August 2022	N/A

Consent and Moderation Requirements (CMR) reference	0003

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

Comments on this unit standard

Please contact the Waihanga Ara Rau Construction and Infrastructure Workforce Development Council qualifications@waihangaararau.nz if you wish to suggest changes to the content of this unit standard.

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