

Title	Mark, cut, join, and test pipework for plumbing, gasfitting and drainlaying		
Level	2	Credits	6

Purpose	<p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> - record dimensions, mark, cut, join and test water supply pipework for plumbing and drainlaying; - record dimensions, mark, cut, join and test gas supply pipework; and - record dimensions, mark, cut, position and connect drainlaying pipework.
----------------	---

Classification	Plumbing, Gasfitting and Drainlaying > Core Plumbing, Gasfitting, and Drainlaying
-----------------------	---

Available grade	Achieved
------------------------	----------

Guidance Information

- 1 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to:
- Health and Safety at Work Act 2015;
 - Plumbers, Gasfitters, and Drainlayers Act 2006;
 - Plumbers, Gasfitters, and Drainlayers Regulations 2010.
 - Gas Act 1992
 - Building Act 2004

The following standards, which are available at <http://www.standards.govt.nz>:

AS/NZS 3500.1:2021 *Plumbing and drainage, Part 1: Water services,*

AS/NZS 3500.2:2021 *Plumbing and drainage, Part 2: Sanitary plumbing and drainage.*

AS/NZS 5601.1 and AS/NZS 5601.2 New Zealand Building Code Clause G12 *Water supplies.*

New Zealand Building Code Clause G13 *Foul water.*

Any new, amended or replacement referenced standards, codes of practice, guidelines, Building Code Acceptable Solutions and Verification Methods, or authority requirements affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.

- 2 Definition

Manufacturer instructions refer to product information and product data sheets provided by the manufacturer of any given product.

Job requirements refer to specific requirements of the job at hand not covered by job specifications.

Job specifications, for the purpose of this unit standard, refer to instructions (oral, written, graphic) and may include any of the following: manufacturers' instructions; design drawing detail specifications; specifications from a specialist source such as an architect, designer, engineer, or a supervisor; and site or work specific requirements.

Other services refer to existing installed services.

- 3 Candidates must hold a current limited certificate trainee authorisation or exemption under supervision as issued under the Plumbers, Gasfitters, and Drainlayers Act 2006.
- 4 **Assessment information**
 Assessment for outcome one of this unit standard must be supervised by a registered plumber.
 Assessment for outcome two of this unit standard must be supervised by a registered gasfitter.
 Assessment for outcome three of this unit standard must be supervised by a registered drainlayer.
 Evidence presented for assessment against this unit standard must be consistent with safe working practices. This includes the knowledge and use of suitable tools and equipment.

Outcomes and performance criteria

Outcome 1

Record dimensions, mark, cut, join and test water supply pipework for plumbing and drainlaying.

Range for a series of pipes making up a system;
 water supply pipework may include – copper, galvanised mild steel, polybutylene, cross-linked polyethylene, polypropylene random copolymer (PP-R), associated fittings;
 joining methods may include – brazing, compression, crimp, crox, push fit, screwed thread, sliding sleeve.

Performance criteria

- 1.1 Determine pipework dimensions in accordance with job requirements.
Range determined from plans or measured from the job, and includes application of relevant allowances for fitting, joining, and bracket support.
- 1.2 Record pipework dimension information on a pipe layout chart in accordance with job requirements.
- 1.3 Accurately mark and cut pipes in accordance with the recorded dimensions.
- 1.4 Join pipes in accordance with job requirements and manufacturer instructions.

- 1.5 Carry out soundness tests in accordance with relevant standards and codes.

Outcome 2

Record dimensions, mark, cut, join and test gas supply pipework.

Range for a series of pipes making up a system;
gas pipework may include – copper, galvanised mild steel, - polyethylene, associated fittings;
joining methods include – joint threading, copper pipe joins, flared fittings, compression fittings.

Performance criteria

- 2.1 Determine pipework dimensions in accordance with job requirements.

Range determined from plans or measured from the job, and includes application of relevant allowances for fitting, joining, and bracket support.

- 2.2 Record pipework dimension information on a pipe layout chart in accordance with job requirements.

- 2.3 Accurately mark and cut pipes in accordance with recorded dimensions.

- 2.4 Join pipes in accordance with job requirements and manufacturer instructions.

- 2.5 Carry out gastight tests in accordance with relevant standards and codes.

Outcome 3

Record dimensions, mark, cut, position and connect drainlaying pipework.

Range pipework material – uPVC, earthenware;
fittings include – 1 gully trap and gully dish, 1 inspection junction, 1 level invert, 1 88° plain bend, 1 uPVC to earthenware adapter, 1 straight inspection.

Performance criteria

- 3.1 Excavation of no more than 1m in depth is carried out in accordance with job requirements.

- 3.2 Stable sub-base is identified in accordance with visual assessment and job requirements.

- 3.3 Base material is selected, placed, and levelled in accordance with site conditions and job requirements.

- 3.4 Accurately mark and cut pipes in accordance with the required dimensions.

- 3.5 Position, install and connect pipework in accordance with job specifications.

3.6 Carry out soundness tests in accordance with relevant standards and codes.

Planned review date	31 December 2029
----------------------------	------------------

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	23 January 2009	31 December 2026
Review	2	12 December 2024	N/A

Consent and Moderation Requirements (CMR) reference	0008
--	------

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

Comments on this unit standard

Please contact 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.