

Unit Standard 24170 <http://www.nzqa.govt.nz/nqfdocs/units/doc/24170.doc>

Title: **Demonstrate knowledge of the requirements for piped services and waste in the Building Code.**

Level 5 Credits 5

Special notes

- 1 Compliance with the following legislation, regulations, and codes is required:
Building Act 2004
The Building Code
Building (Forms) Regulations 2004.
- 2 The scope of buildings assessed within this unit standard fall generally within the coverage of NZS 3604:1999 Timber Framed Buildings, NZS 4229:1999 Concrete masonry buildings not requiring specific engineering design, and NZS 3109:1997 Concrete construction, available from <http://www.standards.co.nz/default.htm>. Please note other Standards are referenced in the Building Code Handbook.
- 3 Reference documents:
The Building Code Compliance Documents
<http://www.dbh.govt.nz/building-code-compliance-documents>;
The Building Code Handbook. <http://www.dbh.govt.nz/UserFiles/File/Publications/Building/Compliance-documents/handbook.pdf>;
Building Officials – Building Act 2004 overview
<http://www.dbh.govt.nz/bofficials-buiding-act-2004-overview>.
- 4 All activities must comply with: any policies, procedures, business protocols, and requirements of the organisation/s involved; ethical codes and standards of relevant professional bodies.

Element 1		
Demonstrate knowledge of the objective, functional requirements and performance standards of Clause G10 – piped services and waste in the Building Code.		
Performance Criteria	Candidate	Assessor
1.1 The objective of Clause G10 – piped services and waste is described in terms of the Building Code	Describe in your own words the objective and functional requirements of Clause G10 - piped services and waste in the New Zealand Building Regulations 1992	Installations shall be constructed to: <ul style="list-style-type: none"> • safeguard people against injury, or illness, from hazards associated with piped substances • provide adequate safety for people from hazards associated with piped substance
1.2 The functional requirements relating to Clause G10 – piped services and waste are described in terms of Building Code		
1.3 The performance standards relating to Clause G10 – piped services and waste are described in terms of Building Code and applied to a given scenario	Identify at least 5 aspects of the performance standards of Clause G10 - piped service and waste in relation to the above scenario	Answer to include five of the following eight points: <ul style="list-style-type: none"> • Leakage • Detrimental contamination • Adverse interaction between services • Provision for removal of moisture or condensate • Protection against corrosion • Pipe systems readily identified • Enclosed spaces constructed to avoid accumulation of gases • Pipe systems shall have isolation devices

Element 2		
Demonstrate knowledge of the objectives, functional requirements and performance standards of Clause G11 – gas as an energy source in the Building Code		
Performance Criteria	Candidate	Assessor
2.1 The objectives of Clause G11 – gas as an energy source are described in terms of the Building Code	Scenario 3 Describe in your own words the objective and functional requirements of Clause G11 - gas as an energy source	Description to include reference to: <ul style="list-style-type: none"> • Safeguard people, property and amenity arising from risk of fire or explosion, • use of gas, and inadequate supply
2.2 The functional requirements relating to Clause G11 – gas as an energy source are described in terms of the Building Code		
2.3 The performance standards relating to Clause G11 – gas as an energy source are described in terms of the Building Code and applied to a given scenario	Using Scenario 3, describe at least three aspects of the performance standards required under G11 - gas as an energy source in the New Zealand Building Regulations 1992	Description to include three from the following five points: <ul style="list-style-type: none"> • Safe pressure range • Cut off devices • Flued appliances having no adverse interaction with other flued appliances • Isolation devices for maintenance, testing, fault detection or repair. • Location and installation of meters to requirements of network utility operator

Element 3		
Demonstrate knowledge of the objectives, functional requirements and performance standards of Clause G12 – water supplies in the Building Code.		
Performance Criteria	Candidate	Assessor
<p>3.1 The objectives of Clause G12 – water supplies are described in terms of the Building Code.</p> <p>Range contamination, infection, loss of amenity.</p>	<p>Describe in your own words the objectives of Clause G12 - water supplies in the New Zealand Building Regulations 1992</p>	<p>Description to include reference to:</p> <ul style="list-style-type: none"> • Safeguard people from illness or injury relating to infection from contaminated water or food • Explosion due to over pressurised hot water vessels • Safeguard people from loss of amenity due to lack of hot water or offensive water supply • Ensure accessibility for people with disabilities • Safe and adequate water supply to drinking water outlets, • sanitary fixtures and appliances
<p>3.2 The functional requirements relating to Clause G12 - water supplies is described in terms of the New Zealand Building Regulations 1992</p>		
<p>3.3 The performance standards relating to Clause G12 – water supplies are described in terms of the Building Code and applied to a given scenario</p>	<p>Using Scenario 3, describe at least six aspects of the performance standards of Clause G12 - water supplies</p>	<p>Description to include six from the following points:</p> <ul style="list-style-type: none"> • Potable water • Non-potable water • Contamination • Non-potable water clearly identified • Adequate hot water supply • Hot water tempering • Water supply systems adequate flow rates, reasonably accessible, maintenance • Back flow/cross contamination prevention • Storage water heaters, pressure relief, temperature control • Taps accessible to users with disabilities • Avoiding likelihood of leakage

Element 4		
Demonstrate knowledge of the objectives, functional requirements and performance standards of Clause G13 – foul water in the Building Code		
Performance Criteria	Candidate	Assessor
<p>4.1 The objectives of Clause G13 – foul water are described in terms of the Building Code.</p> <p>Range contamination, infection, loss of amenity, odour, offensive matter.</p>	<p>Describe in your own words the objectives of Clause G13 - foul water in the New Zealand Building Regulations 1992</p>	<p>Description to include reference to:</p> <ul style="list-style-type: none"> • Safeguard people from illness or injury relating to infection from personal hygiene activities • Safeguard people from loss of amenity due to unpleasant odours or accumulation of offensive matter • Sanitary fixtures shall have adequate plumbing and drainage to carry foul water to appropriate outfalls
<p>4.2 The functional requirements relating to Clause G13 – foul water are described in terms of the Building Code</p>		
<p>4.3 The performance standards relating to Clause G13 – foul water are described in terms of the Building Code and applied to a given scenario</p>	<p>With reference to Scenario 1, describe at least three aspects of the plumbing system from the performance criteria of Clause G13.</p>	<p>Description to include three from the following four points:</p> <ul style="list-style-type: none"> • Convey foul water from buildings to a drainage system • Avoid blockage and leakage • Avoid foul air and gases from entering the building • Provide access for maintenance and clearing blockages

Element 4 *Continued from the previous page...*

Demonstrate the objectives, functional requirements and performance standards of Clause G13– foul water

Performance Criteria	Candidate	Assessor
<p>4.3 The performance standards relating to Clause G13 – foul water are described in terms of the Building Code and applied to a given scenario</p> <p><i>Continued from the previous page</i></p>	<p>Describe at least four aspects of the drainage system from the performance criteria of Clause G13 - foul water, in relation to the above scenario.</p>	<p>Description to include four answers from the following eight points:</p> <ul style="list-style-type: none">• Convey foul water to an appropriate outfall• Avoid blockage and leakage• To be supported, jointed and protected to avoid the likelihood of penetration of roots or the entry of ground water.• Provide access for maintenance and clearing blockages• Be ventilated to avoid the likelihood of foul air and gases accumulating in the drainage system and sewer• Be constructed to avoid likelihood of damage from superimposed loads or ground movement.• Sewer connections made in a manner that avoids damage and to the approval of the network utility operator.• Where no sewer is available, an adequate on site disposal system shall be provided for foul water.

Element 5		
Demonstrate knowledge of the objective, functional requirements and performance standards of Clause G15 – solid waste in the Building Code		
Performance Criteria	Candidate	Assessor
5.1 The objective of Clause G15 – solid waste is described in terms of the Building Code	Describe in your own words the objective and functional requirements of Clause G15 - solid waste in the New Zealand Building Regulations 1992	Description to include reference to: <ul style="list-style-type: none"> • Safeguard people from illness or injury relating to infection or contamination resulting from solid waste • Buildings shall be provided with spaces and facilities for collection and holding of solid waste arising from the intended use of the building
5.2 The functional requirements relating to Clause G15 – solid waste are described in terms of the Building Code		
5.3 The performance standards relating to Clause G15 – solid waste are described in terms of the Building Code and applied to a given scenario	With reference to Scenario 4, describe the performance standards in G15 NB: assume there is no waste chute	Description to provide reference to: <ul style="list-style-type: none"> • sufficient size for volume of waste, • reasonable access for disposal • capable of maintaining sanitary conditions for type of waste (G15.3.1 a, b and c)