

Compliance Document for New Zealand Building Code Clause G15 Solid Waste

Prepared by the Department of Building and Housing

This Compliance Document is prepared by the Department of Building and Housing. The Department of Building and Housing is a Government Department established under the State Sector Act 1988.

Enquiries about the content of this document should be directed to:



Department of Building and Housing
PO Box 10-729, Wellington.
Telephone 0800 242 243
Fax 04 494 0290
Email: info@dbh.govt.nz

Compliance Documents are available from www.dbh.govt.nz

New Zealand Government

© Department of Building and Housing 2010

This Compliance Document is protected by Crown copyright, unless indicated otherwise. The Department of Building and Housing administers the copyright in this document. You may use and reproduce this document for your personal use or for the purposes of your business provided you reproduce the document accurately and not in an inappropriate or misleading context. You may not distribute this document to others or reproduce it for sale or profit.

The Department of Building and Housing owns or has licences to use all images and trademarks in this document. You must not use or reproduce images and trademarks featured in this document for any purpose (except as part of an accurate reproduction of this document) unless you first obtain the written permission of the Department of Building and Housing.

Status of Compliance Documents

Compliance Documents are prepared by the Department of Building and Housing in accordance with section 22 of the Building Act 2004. A Compliance Document is for use in establishing compliance with the New Zealand Building Code.

A person who complies with a Compliance Document will be treated as having complied with the provisions of the Building Code to which the Compliance Document relates. However, a Compliance Document is only one method of complying with the Building Code. There may be alternative ways to comply.

Users should make themselves familiar with the preface to the New Zealand Building Code Handbook, which describes the status of Compliance Documents and explains alternative methods of achieving compliance.

Defined words (italicised in the text) and classified uses are explained in Clauses A1 and A2 of the Building Code and in the Definitions at the start of this Compliance Document.

G15: Document History			
	Date	Alterations	
First published	July 1992		
Amendment 1	September 1993	p. vi, References	
Amendment 2	1 July 2001	p. 2, Document History, Status p. 4, Definitions	
Amendment 3	Published 30 June 2010 Effective from 30 September 2010	p. 2, Document History, Status p. 5, Contents p. 7, References	p. 9, Definitions p. 14, G15/AS1 3.1 p. 17, Index
Reprinted incorporating Amendments 1–3	30 September 2010		
Note: Page numbers relate to the document at the time of Amendment and may not match page numbers in current document.			

Document Status

The most recent version of this document, as detailed in the Document History, is approved by the Chief Executive of the Department of Building and Housing. It is effective from 30 September 2010 and supersedes all previous versions of this document.

People using this Compliance Document should check for amendments on a regular basis. The Department of Building and Housing may amend any part of any Compliance Document at any time. Up-to-date versions of Compliance Documents are available from www.dbh.govt.nz

New Zealand Building Code

Clause G15 Solid Waste

This Clause has been extracted from the New Zealand Building Code contained in the First Schedule of the Building Regulations 1992.

FIRST SCHEDULE—continued	
Clause G15—SOLID WASTE	
Provisions	Limits on application
<p>OBJECTIVE G15.1 The objective of this provision is to safeguard people from injury or illness caused by infection or contamination from solid waste.</p> <p>FUNCTIONAL REQUIREMENT G15.2 <i>Buildings</i> shall be provided with space and facilities for the collection, and safe hygienic holding prior to disposal, of solid waste arising from the <i>intended use</i> of the buildings.</p> <p>PERFORMANCE G15.3.1 Where provision is made within <i>buildings</i> for the collection and temporary holding of solid waste, the spaces provided shall be:</p> <ul style="list-style-type: none"> (a) Of sufficient size for the volume of waste and frequency of disposal, (b) Provided with reasonable access for the depositing and collection of the waste, (c) Capable of maintaining sanitary conditions having regard to the types of waste and storage containers, and (d) Capable of maintaining the appropriate temperature for the type of waste stored. <p>G15.3.2 Where a rubbish chute is provided, it shall be located and constructed to:</p> <ul style="list-style-type: none"> (a) Convey the solid waste to an appropriate storage container, (b) Avoid the likelihood of blockage or leakage, (c) Permit easy cleaning and maintenance, 	<p>Requirement G15.2 shall not apply to <i>Detached Dwellings, household units of Multi-unit Dwellings, Outbuildings or Ancilliary buildings</i> if there is independent access or private open space at ground level.</p>

FIRST SCHEDULE—*continued*

Provisions	Limits on application
<p>(d) Avoid the likelihood of foul air or gases accumulating or entering the <i>building</i>,</p> <p>(e) Avoid the likelihood of the spread of <i>fire</i> beyond the refuse chute,</p> <p>(f) Have openings that allow waste to be safely deposited in the chute, and</p> <p>(g) Restrict access by children, animals and vermin.</p> <p>G15.3.3 Where it is acceptable to the <i>network utility operator</i>, solid waste which has been suitably treated for disposal to a <i>sewer</i> may be discharged via a <i>foul water drain</i> complying with Clause G13 “Foul Water”.</p>	

Contents

	Page
References	7
Definitions	9
Verification Method G15/VM1	11
Acceptable Solution G15/AS1	13
1.0 Capacity of Containers and Storage Areas	13
2.0 Carry Distance	13
3.0 Solid Waste Storage Areas	14
Amend 3 3.1 Another Acceptable Solution	14
Sep 2010 4.0 Solid Waste Chutes	14
Index	17

Amend 3
Sep 2010

References

Amend 1
Sep 1993

For the purposes of New Zealand Building Code compliance, the acceptable New Zealand and other Standards, and other documents referred to in this Compliance Document (primary reference documents) shall be the editions, along with their specific amendments, listed below.

Where the primary reference documents refer to other Standards or other documents (secondary reference documents), which in turn may also refer to other Standards or other documents, and so on (lower order reference documents), then the applicable version of these secondary and lower order reference documents shall be the version in effect at the date this Compliance Document was published.

Amend 3
Sep 2010

Standards New Zealand

Amend 1
Sep 1993

NZS 3114: 1987 Specification for concrete surface finishes
Amend: 1

Amend 3
Sep 2010

NZS 4304: 2002 Health care waste management

Where quoted

AS1 3.0.2

AS1 3.1.1

Definitions

Amend 3
Sep 2010

This is an abbreviated list of definitions for words or terms particularly relevant to this Compliance Document. The definitions for any other italicised words may be found in the New Zealand Building Code Handbook.

Amend 3
Sep 2010

Adequate *Adequate* to achieve the objectives of the *building code*.

Building has the meaning given to it by sections 8 and 9 of the *Building Act 2004*.

Drain A pipe normally laid below ground level including fittings and equipment and intended to convey *foul water* or *surface water* to an *outfall*.

Fixture An article intended to remain permanently attached to and form part of a *building*.

Foul water The discharge from any *sanitary fixtures* or *sanitary appliances*.

Habitable space A space used for activities normally associated with domestic living, but excludes any bathroom, laundry, water-closet, pantry, walk-in wardrobe, corridor, hallway, lobby, clothes-drying room, or other space of a specialised nature occupied neither frequently nor for extended periods.

Network utility operator means a person who—

- a) undertakes or proposes to undertake the distribution or transmission by pipeline of natural or manufactured gas, petroleum, or geothermal energy; or
- b) operates or proposes to operate a network for the purpose of—
 - i) telecommunication as defined in section 5 of the Telecommunications Act 2001; or
 - ii) radiocommunications as defined in section 2(1) of the Radiocommunications Act 1989; or
- c) is an electricity operator or electricity distributor as defined in section 2 of the Electricity Act 1992 for the purpose of line function services as defined in that section; or

Amend 2
Jul 2001

Amend 3
Sep 2010

d) undertakes or proposes to undertake the distribution of water for supply (including irrigation); or

e) undertakes or proposes to undertake a drainage or sewerage system.

Amend 3
Sep 2010

Outfall That part of the disposal system receiving *surface water* or *foul water* from the drainage system. For *foul water* the *outfall* may include a *sewer* or a septic tank. For *surface water*, the *outfall* may include a natural water course, kerb and channel, or soakage system.

Plumbing system Pipes, joints and fittings laid above ground and used for the conveyance of *foul water* to the *foul water drain*, and includes *vent pipes*.

Sanitary appliance An appliance which is intended to be used for *sanitation*, but which is not a *sanitary fixture*. Included are machines for washing dishes and clothes.

Sanitary fixture Any *fixture* which is intended to be used for *sanitation*.

Sanitation The term used to describe the activities of washing and/or excretion carried out in a manner or condition such that the effect on health is minimised, with regard to dirt and infection.

Sewer A *drain* that is under the control of, or maintained by, a *network utility operator*.

Surface water All naturally occurring water, other than sub-surface water, which results from rainfall on the site or water flowing onto the site, including that flowing from a *drain*, stream, river, lake or sea.

Verification Method G15/VM1

No specific test methods have been adopted for verifying compliance with the Performance of NZBC G15.

Acceptable Solution G15/AS1

1.0 Capacity of Containers and Storage Areas

1.0.1 The method of solid waste disposal in *multi-unit* and *group dwellings* shall be by the provision of moveable containers having a capacity of at least 80 litres for each dwelling unit.

1.0.2 Where containers are stored in a common area within a *building* or part of a *building*, a space of at least 0.5 m x 0.5 m by 1 m high shall be provided for each dwelling unit.

1.0.3 If a common storage area such as a ground floor rubbish area is provided within the *building*, it shall be *adequately* ventilated to the open air in compliance with NZBC G4.

COMMENT:

1. Because rubbish is likely to be removed less frequently in multi-storey residential *buildings*, ventilated space for the storage of the container is desirable.
2. The container capacity is based on the volume of a typical rubbish bag and on the assumption that the wastes will be collected weekly.
3. For most *detached dwellings* this storage will be outside the *building*.

2.0 Carry Distance

2.0.1 In *multi-unit* and *group dwellings*, the maximum carry distance between any occupancy and a common solid waste storage area or chute shall be 30 m.

COMMENT:

1. Common rubbish storage areas which are remote from accommodation units will encourage the accumulation of rubbish within each unit, and may become a health hazard.
2. There is no requirement for non-residential *buildings*.

3.0 Solid Waste Storage Areas

3.0.1 An acceptable common storage area for solid waste (see Figure 1) shall:

- a) Have interior surfaces which are easily cleaned,
- b) Be totally enclosed and separated from *habitable spaces* and food preparation areas,
- c) Be protected from high temperatures which could hasten putrefaction, and
- d) Be screened from *habitable spaces* to reduce visual impact.

3.0.2 Concrete floors are acceptable if they have a U5 trowelled finish complying with NZS 3114 and are graded at 1 in 50 to a floor drain. Floor drains shall comply with NZBC G13.

3.0.3 Walls in spaces where storage bins are likely to receive food wastes and are subject to spillage shall be constructed of concrete, galvanised sheet steel, vinyl or similar material.

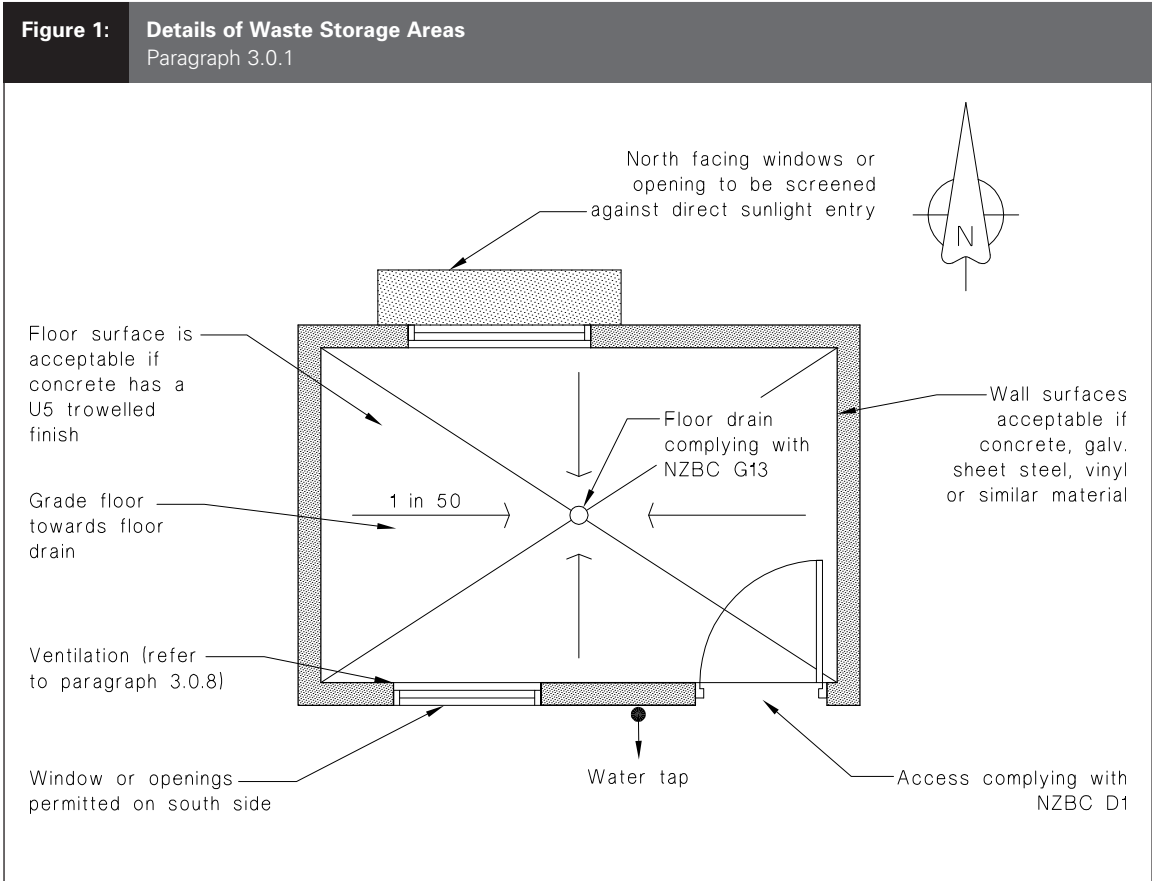
3.0.4 Windows facing north in any food waste storage area shall be screened from direct sunlight in order to reduce the likelihood of putrefaction.

3.0.5 An alternative solution is for perishable wastes to be stored within a refrigerated store room.

3.0.6 Opening windows shall be screened to prevent entry by insects and other vermin.

3.0.7 A water supply tap, complying with NZBC G12, shall be provided for washing down common waste storage areas.

3.0.8 Ventilation: Storage areas located indoors shall be *adequately* ventilated to open air in compliance with NZBC G4.



3.0.9 Mechanical ventilation: Where mechanical ventilation is used, it shall:

- a) Provide no less than 6 air changes per hour,
- b) Maintain a negative pressure within the storage area relative to adjacent areas (if any), and
- c) Discharge foul air to a safe place to avoid the likelihood of exhaust air entering any building.

3.0.10 Access between the storage area and collection vehicle shall comply with NZBC D1.

COMMENT:

For ease of collection, the access route should be level and as short as possible.

3.1 Another Acceptable Solution

3.1.1 NZS 4304 Section 6.2 is another Acceptable Solution for storage areas, but may exceed the performance criteria of NZBC G15.

4.0 Solid Waste Chutes

4.0.1 Where waste chutes with side-entry hoppers (see Figure 2) are used as an alternative to common storage areas, the chute shall:

- a) Have a minimum internal diameter of 450 mm,
- b) Be self-cleaning, vertical and have smooth joints,
- c) Be vented at the top above the roof line, and at the bottom above the container, and
- d) Terminate centrally over a suitable container located in a room complying with Paragraphs 3.0.1 to 3.0.9.

COMMENT:

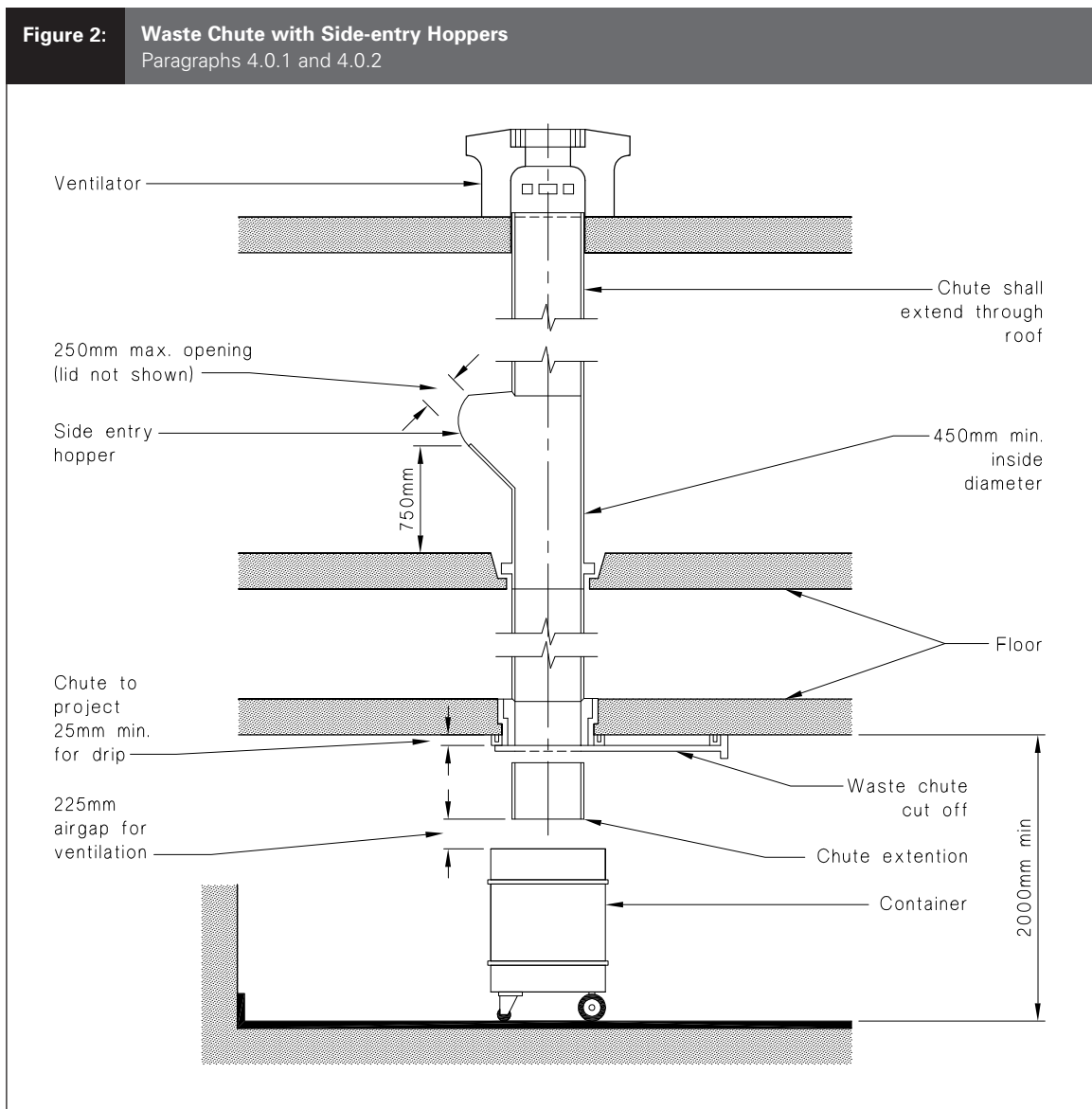
The chute cut-off should be kept open except when changing containers, to ensure the chute is clear at all times.

Amend 3
Sep 2010

4.0.2 Side-entry hoppers (see Figure 2) shall:

- a) Have a maximum opening diameter of 250 mm,
- b) Have self-closing, tight-fitting doors to prevent odours escaping,
- c) Have an easily cleaned wall surface surrounding the opening for 300 mm (this may be galvanised steel, ceramic tiles or similar material),
- d) Be located outside any dwelling or enclosed stair access, and away from any *habitable space* or food preparation area, and
- e) Have *adequate* ventilation, preferably by being located in the open air (e.g. on an outside balcony). Where hoppers are inside *buildings*, they shall be located in separate ventilated compartments complying with NZBC G4.

Figure 2: Waste Chute with Side-entry Hoppers
Paragraphs 4.0.1 and 4.0.2



COMMENT:

1. Hoppers are not intended for weekly rubbish bags, but are for daily use in smaller quantities.
2. Hoppers should not be situated near bedrooms because of noise and odours. To prevent maintenance problems, it is recommended that no more than 6 household units be serviced by each hopper entry.
3. Hoppers are best located to take advantage of natural daylight. *Adequate* artificial light should also be available.

4.0.3 *Buildings* incorporating waste chutes, shall be provided with a water supply tap on every second floor, adjacent to the chute, to facilitate cleaning.

Index G15/VM1 & AS1

All references to Verification Methods and Acceptable Solutions are preceded by **VM** or **AS** respectively.

Solid Waste

Amend 3
Sep 2010

storage	AS1 1.0, 3.0, Figure 1
another Acceptable Solution	AS1 3.1
capacity	AS1 1.0.1
location	AS1 2.0.1
floors	AS1 3.0.2
walls.	AS1 3.0.3
water supply	AS1 3.0.7
windows	AS1 3.0.4, 3.0.6
space required.	AS1 1.0.2
vehicle access.	AS1 3.0.10
ventilation	AS1 1.0.3, 3.0.8, 3.0.9
waste chutes.	AS1 4.0, Figure 2
cleaning	AS1 4.0.1 b), 4.0.2 c), 4.0.3
location.	AS1 4.0.2 d)
ventilation.	AS1 4.0.2 e)

