



Welcome back to what promises to be another full year in the construction industry.

We hope the holidays were relaxing and that Santa brought you some new toys to play with.

In this issue we have articles on the following subjects:

- Department of Building and Housing – New Publication on Warrant of Fitness and Compliance Schedules
- Bedroom Sizes
- Drain Separation to Other Services
- Brick Veneer Ventilation
- Two articles from ACC
  - Hot Water Safety
  - Chainsaw Safety
- Seminar – Building Act 2004, Schedule 1 building work that does not require a building consent, new exemptions introduced on 23 December 2010
- Quiz on articles in this newsletter

For any enquiries regarding this news sheet, please contact Simon Tonkin on **(03) 211 1777**



New Publication:

- Owner's responsibilities to ensure their buildings are safe to use  
Guidance on building warrants of fitness and compliance schedules – November 2010

This booklet is available on the department's website – [www.dbh.govt.nz](http://www.dbh.govt.nz)

The first four sections of the booklet have been reproduced for your information.

1. Purpose and introduction
2. The Building Act 2004
3. Explanation of Terms
4. The Responsibilities of Building Owners

### **PURPOSE AND INTRODUCTION**

The purpose of this document is to provide guidance to building owners (and their agents) on how to meet the requirements of the Building Act 2004 (the Building Act) relating to building warrants of fitness, compliance schedules and related matters.

This guidance is particularly relevant to the owners of any building that is not a stand-alone house (unless the house has a cable car) because the building owner is responsible for ensuring any specified systems (which have mostly life safety systems) continue to ensure the building is safe for people to enter, occupy or work in.

This guidance primarily covers:

- how a compliance schedule is developed
- the building warrant of fitness process
- amending a compliance schedule
- useful information when buying a building with a compliance schedule.

For a quick overview of the compliance schedule and building warrant of fitness system, please refer to the roadmap flowcharts on page 6. This will identify the start point and the procedure for the scenario that best suits the reader's situation. There are three scenarios which deal with existing compliance schedules. They are:

- a building with an existing compliance schedule
- an amendment to a compliance schedule triggered by a council decision, the owner's request or on the recommendation of an independent qualified person
- an amendment to a compliance schedule triggered by a building consent.

For the purposes of clarity and logical sequencing, this document follows the early life of a new building with specified systems from design, construction, occupation, through to on-selling the building. The commentary focuses primarily on matters associated with specified systems, compliance schedules and building warrants of fitness, and not on the building consent process.

A story based on the life of a new commercial building provides a real-life example of the compliance schedule/building warrant of fitness process and there are also a number of supporting notes throughout the document.

For those building owners who are still uncertain about what is required under the Building Act after reading this guidance, it is strongly recommended that they seek appropriate professional advice (for example, from an independent qualified person or the local council's building control department).

## **THE BUILDING ACT 2004**

The Building Act is the primary piece of legislation governing buildings in New Zealand. It sets the requirements for the construction, alteration, demolition, use and maintenance of new and existing buildings. The Building Act's purpose is to ensure buildings are safe and built right first time. It is administered centrally by the Department of Building and Housing (the Department) and is regulated locally by regional, city and district councils.

Under the Building Act, the New Zealand Building Code (as part of the Building Regulations) defines the minimum standards buildings must meet for the whole of New Zealand.

The Building Act also requires the owner of a building with specified systems (such as sprinklers, lifts, fire alarms) to have a compliance schedule and to provide the council with an annual building warrant of fitness to confirm that the building's specified systems are being maintained and are operating effectively.

You can get more information about the [Building Act 2004 online](#).

## **EXPLANATION OF TERMS**

The following explanations of terms used in this document are for the purposes of this document only. When using these terms please refer to the Building Act, Building Regulations and other primary sources for their full definitions.

**Building consent:** An approval issued by a building consent authority (the building control department of the district, city or regional council) to undertake building work in accordance with the approved plans and specifications.

**Code compliance certificate:** A certificate issued by a council, at the completion of building work, confirming that the council is satisfied on reasonable grounds that the building work undertaken complies with the Building Code and approved building consent.

**Commercial building:** A building or use of a building where any natural resources, goods, services or money are either developed, sold, exchanged or stored. For example, a bank, car-parking facility, computer centre, office, restaurant, shop, showroom or storage facility.

**Compliance schedule:** A document issued by a council for buildings containing specified systems. The compliance schedule states the specified systems, their performance standards and includes the inspection, maintenance and reporting procedures needed to keep them in good working order.

**Compliance schedule statement:** A written statement issued by a council as temporary public notification of the specified systems covered by the compliance schedule for a building and where the compliance schedule is kept. It is not a statement about the performance of the specified systems listed. It is required to be publicly displayed for 12 months from the issue of the compliance schedule. It is then replaced by the first building warrant of fitness.

**Council:** A district, city or regional council having the jurisdiction over the area where a building is located. Most councils are also building consent authorities that issue building consents, code compliance certificates and compliance schedules.

**Form 11 – Application for amending a compliance schedule:** This form is used to formally advise the council of any change required to a compliance schedule. Refer to Appendix 2 for a worked example.

**Form 12 – Building warrant of fitness:** A written statement issued annually to the council, a copy of which is also publicly displayed in the building. The building warrant of fitness is a declaration by the building owner, or the building owner’s agent, that all the specified systems in the building have been inspected, maintained and reported in accordance with the compliance schedule for a period of 12 months prior to the issue date.

The warrant of fitness for a building must be prepared in accordance with the prescribed form (Form 12) in the Building (Forms) Regulations 2004. Refer to Appendix 3 for a worked example.

**Form 12A – Certificate of compliance with inspection, maintenance and reporting procedures:** This form is used as verification that the inspection and maintenance procedures under the compliance schedule have been carried out. They are issued by each independent qualified person who undertook inspection or maintenance of the building’s specified systems. Refer to Appendix 4 for worked examples.

**Independent qualified person (IQP):** A person (or firm) approved by a council as qualified to inspect, maintain and report on specified systems.

**Inspection and maintenance reports:** Annual written reports which are kept with the compliance schedule for at least two years. This includes log books and test certificates.

**Performance standard:** The level of performance a specified system was intended to meet, and to continue to meet, at the time it was designed and installed in a building.

**Resource consent:** A document issued by council giving town planning approval for certain activities and buildings on a property (covered by the Resource Management Act 1991).

**Specified systems:** Specified systems are systems or features that contribute to the proper functioning of a building. Specified systems require ongoing inspection and maintenance to ensure they function as required, because if they fail to operate properly, they have the potential to adversely affect health or life safety.

The specified systems are listed in Schedule 1 of the Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005, and in Appendix 1 of this document. Examples include, but are not limited to, sprinkler systems, fire alarms, lifts, escalators and cable cars.

**Third-party verification:** A process a council can use for getting an independent party to confirm that a specified system has been installed and is functioning to the required standard so they can be satisfied on reasonable grounds that the work complies with the Building Code and the performance standard specified in the design. Verification might include installation certificates, commissioning results and test reports.

## **THE RESPONSIBILITIES OF BUILDING OWNERS**

If you own a building that contains specified systems the Building Act requires you to have a compliance schedule and you must ensure the effective operation of all the specified systems for the life of the building. This requirement does not apply to single household units (residential homes) unless they have a cable car. This is achieved by continuously meeting their respective

performance standards and all the inspection, maintenance and reporting requirements of the compliance schedule issued by the council.

To help ensure your responsibilities have been met, the Building Act requires you to sign, issue and publicly display an annual building warrant of fitness and provide a copy annually to the council whose district the building is in.

It is also your responsibility to keep the compliance schedule in the location nominated on the compliance schedule statement and building warrant of fitness, so that it, and other documents are readily available for inspection by authorised people (such as council inspectors, fire service personnel and independent qualified persons). These include annual written reports, log books (records of inspections by owner/tenant/maintenance and inspection personnel) and test certificates which are to be filed, for at least two years, with the compliance schedule.

## BEDROOM SIZE



A recent question to Council was what is the minimum size of a bedroom in a dwelling.

The answer is not easy to find for a dwelling as the Building Code Clause G5 interior environment does not cover a dwellings bedroom space. The objective of this clause is to safeguard people from injury or loss of amenity caused by inadequate activity space. There is no limit on this clause so all buildings have to achieve this objective.

The functional requirements and performance criteria have mostly limits on the clause to old peoples homes and early childhood centres.

The acceptable solution notes sizes for bedrooms for old peoples homes and refers to NZS 4121, 2001 for bedroom sizes for people with disabilities. All of which is no assistance for the minimum size of a bedroom in a dwelling.

It is the editors view that a bedroom size would need to be adequate to perform the task required. In other words the size of a bedroom would need to be able to take the size of a bed and have adequate space to allow a person to move around the bed.

This means that a designer would need to decide what size is adequate to accommodate the owners needs.

By comparison a bedroom in an old persons home under the acceptable solution G5 / AS1 is required to have a minimum width of 2.2m and a floor area of a minimum of 6.0m and in the absence of a built in wardrobe increase the space by an additional 0.75m<sup>2</sup>.

NZS 4121, 2001 notes the minimum size of a bedroom is as per clause 14.7.5.1 and figure 54.

Figure 54 shows two sizes 12.6m<sup>2</sup> = 3.0 x 4.2 with one wardrobe and 12.96m<sup>2</sup> = 3.6 x 3.6 with two wardrobes.

Building Code Clause G5 interior environment and the acceptable solution is reproduced for your reference.

### **NEW ZEALAND BUILDING CODE CLAUSE G5 INTERIOR ENVIRONMENT**

The mandatory provisions for building work are contained in the New Zealand Building Code (NZBC), which comprises the First Schedule to the Building Regulations 1992. The relevant NZBC Clause for Interior Environment is G5. Note that section 25 of the Disabled Persons Community Welfare Act 1975 has been replaced by section 47A of the Building Act 1991.

#### **FIRST SCHEDULE—continued Clause G5—INTERIOR ENVIRONMENT**

<b>Provisions</b>	<b>Limits on Application</b>
<b>OBJECTIVE</b> <b>G5.1</b> The objective of this provision is to: (a) Safeguard people from illness caused by low air temperature,	

<p>(b) Safeguard people from injury or loss of <i>amenity</i> caused by inadequate activity space,</p> <p>(c) Safeguard people from injury caused by unsafe installations, and</p> <p>(d) Ensure that <i>people with disabilities</i> are able to carry out normal activities and processes within <i>buildings</i>.</p> <p><b>FUNCTIONAL REQUIREMENT</b></p> <p><b>G5.2.1</b> <i>Buildings</i> shall be <i>constructed</i> to provide:</p> <p>(a) An <i>adequate</i>, controlled interior temperature,</p> <p>(b) <i>Adequate</i> activity space for the <i>intended use</i>, and</p> <p>(c) <i>Accessible</i> spaces and facilities.</p> <p><b>G5.2.2</b> Heating appliances in <i>buildings</i> shall be installed in a way that reduces the likelihood of injury.</p> <p><b>PERFORMANCE</b></p> <p><b>G5.3.1</b> <i>Habitable spaces</i>, bathrooms and recreation rooms shall have the provision for maintaining the internal temperature at no less than 16°C measured at 750 mm above floor level, while the space is <i>adequately</i> ventilated.</p> <p><b>G5.3.2</b> Heating appliances, and any attached cables, pipes or other fittings shall be securely fixed in place.</p> <p><b>G5.3.3</b> <i>Habitable spaces</i> shall have sufficient space for activity, furniture, and sanitary and mobility aids.</p> <p><b>G5.3.4</b> Where reception counters or desks are provided for public use, at least one counter or desk shall be <i>accessible</i>.</p> <p><b>G5.3.5</b> <i>Buildings</i> shall be provided with listening systems which enable enhanced hearing by people with hearing aids</p> <p><b>G5.3.6</b> Enhanced listening systems shall be identified by signs complying the Clause F8 "Signs".</p>	<p>Objective G5.1 (d) shall apply to those <i>buildings</i> to which section 25 of the Disabled Persons Community Welfare Act 1975 applies.</p> <p>Requirement G5.2.1 (a) shall apply only to <i>habitable spaces</i>, bathrooms and recreation rooms in old people's homes and early childhood centres</p> <p>Requirement G5.2.1 (b) shall apply only to old people's homes.</p> <p>Requirement G5.2.1 (c) shall apply only to <i>Communal Residential, Communal Non-residential, and Commercial buildings</i>.</p> <p>Performance G5.3.1 shall apply only to old people's homes and early childhood centres.</p> <p>Performance G5.3.2 shall apply only to old people's homes and early childhood centres.</p> <p>Performance G5.3.3 shall apply only to old people's homes.</p> <p>Performance G5.3.4 applies only to <i>Communal Residential, Communal Non-Residential, and Commercial buildings</i>.</p> <p>Performance G5.3.5 applies only to:</p> <p>(a) <i>Communal Non-residential</i> assembly spaces occupied by more than 250 people, and</p> <p>(b) Any theatre, cinema, or public hall, and</p> <p>(c) Assembly spaces in old people's homes occupied by more than 20 people</p>
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### **VERIFICATION METHOD G5/VM1**

No specific methods have been adopted for verifying compliance with the Performance of NZBC G5.

## **DEFINITIONS**

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

**Accessible** - Having features to permit use by people with disabilities.

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

**Amenity** - An attribute of a building which contributes to the health, physical independence, and well being of the building's users but which is not associated with disease or a specific illness.

**Building** - has the meaning ascribed to it by the Building Act 1991.

**Building element** - Any structural and non structural component or assembly incorporated into or associated with a building. Included are fixtures, services, drains, permanent mechanical installations for access, glazing, partitions, ceilings and temporary supports.

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

**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.

**Intended use** of a building includes:

- a) Any reasonably foreseeable occasional other use that is not incompatible with the intended use; and
- b) Normal maintenance; and
- c) Activities taken in response to fire or any other reasonably foreseeable emergency – but does not include any other maintenance and repairs or rebuilding.

**People with disabilities** - means any person who suffers from physical or mental disability to such a degree that he or she is seriously limited in the extent to which he or she can engage in the activities, pursuits, and the processes of everyday life.

**R-value** - The common abbreviation for describing the values of both thermal resistance and total thermal resistance.

**Thermal resistance** - The resistance to heat flow of a given component of a building element. It is equal to the temperature difference (°C) needed to produce unit heat flux (W/m<sup>2</sup>) through unit area (m<sup>2</sup>) under steady conditions. The units are °Cm<sup>2</sup>/W.

**Total thermal resistance** - The overall air-to-air thermal resistance across all components of a building element such as a wall, roof or floor. (This includes the surface resistances which may vary with environmental changes e.g. temperature and humidity, but for most purposes can be regarded as having standard values as given in NZS 4214.)

## **ACCEPTABLE SOLUTION G5/AS1**

### **1.0 Temperature Control**

**1.0.1** Heating to provide acceptable temperature control shall take account of:

- a) Local climate,
- b) Size of the heated space,

- c) Thermal resistance (R-value) of the building elements enclosing the space to be heated, and
- d) Whether the walls of the heated space are internal or external.

**1.0.2** Indicative R-values for different types of construction are given in E3/AS1.

**1.0.3** Tables 1 and 2 provide a method of determining the heating requirements for the habitable spaces, bathrooms and recreation rooms of smaller old people's homes and early childhood centres (up to 10 residents), of single storey construction. The heating requirements of larger and multi-storey buildings shall be specifically calculated

**Table 1: Acceptable Heating Output for Spaces of up to 10 m<sup>2</sup> Floor Area** (See note 1) Paragraph 1.0.3

Locality	Average R-value <small>(the average total thermal resistance of floor, walls and roof/ceiling of the space to be heated)</small>	Heating wattage (W) for a space which has			
		Four external walls	Three external walls	Two external walls	One external wall
North Island	1.5	720	650	580	510
(see note 2)	0.7	1250	1100	950	800
South Island	1.5	1040	940	840	740
	0.7	1650	1410	1170	930

Notes:  
 1. For floor areas exceeding 10 m<sup>2</sup> use factors given in Table 2.  
 2. North Island localities more than 500 m above sea level shall meet South Island requirements.

**Table 2: Multiplying Factors for Determining Acceptable Wattage in Spaces Exceeding 10 m<sup>2</sup> Floor Area** Paragraph 1.0.3 and Table 1

Floor area (m <sup>2</sup> )	10	20	40	80	160
Multiplying factor	1.0	1.4	2.0	2.8	4.0

Note:  
 Interpolation for different floor areas is permitted.

**1.0.4** Example of use of Tables 1 and 2:  
 For a space (South Island) of 20 m<sup>2</sup> and an average R-value of 1.5, with 2 external walls, the necessary heating power is:

$$840 \text{ (Table 1)} \times 1.4 \text{ (Table 2)} = 1176 \text{ W}$$

The average R-value for example may be

$$\frac{0.4 \text{ (floor)} + 2.0 \text{ (walls)} + 3.0 \text{ (roof)}}{3} = \frac{5.4}{3} = 1.8$$

In this case the wattage is read from the 1.5 Average R-value line, in Table 1.

## 2.0 Space

**2.0.1** Each old people's home shall have spaces for living, dining and sleeping.

**2.0.2** Spaces for living and dining may be combined provided that the total space can, if necessary, be divided into separate living and dining areas each satisfying their respective requirements for width and floor area.

**2.0.3** Spaces provided shall have dimensions of no less than those given in Table 3.

## 3.0 People with Disabilities

**3.0.1** Acceptable activity space shall comply with NZS 4121.

<b>Table 3: Space Provision for Old People's Homes</b> Paragraph 2.0.3		
<b>Minimum dimensions</b>		
<b>Type of space</b>	<b>Width (m)</b>	<b>Floor area (m<sup>2</sup>)</b>
Living room	2.75	10 + 1 for each resident over 3 in number
Dining room	2.75	8 + 1 for each resident over 3 in number
Bedroom	2.2	6 for each resident (see note 1)

**Note:**

1. Floor area for bedrooms shall exclude built-in wardrobes. In the absence of a built-in wardrobe, an additional 0.75 m<sup>2</sup> shall be provided for each resident.

## DRAIN SEPARATION TO OTHER SERVICES



A query to Council recently was – could a power cable be run in the same trench as the foul sewer and stormwater mains?

This query would also relate to any service installed underground to a dwelling such as telecom, gas or water pipes.

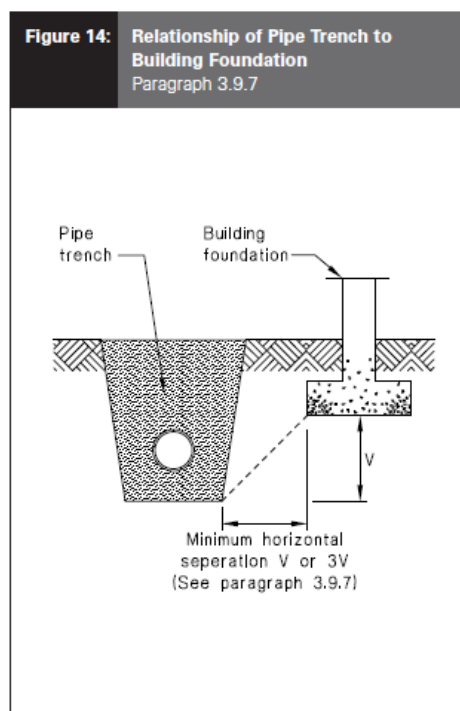
The acceptable solution for foul drainage G13 / AS1 and the acceptable solution for stormwater drainage E1 / AS1. Both of these acceptable solutions deal only with their respective pipes and are silent on how many pipes can be in one trench. Also the simple house SH / AS1 is equally silent on proximity to other services in trenches. They do both have the similar wording on trench width, placing and compacting and proximity of trench to a building.

The trench width in both E1 / AS1 and G13 / AS2 note:

The width of the trench shall be no less than the pipe diameter  $D$  plus 200mm. Trench width at the top of the pipe shall be no more than 600mm unless the pipe(s) in the trench are covered with concrete.

Also the working of proximity of trench to a building is the same in E1 / AS1 and G13 / AS2.

For light timber frame and concrete masonry buildings founded on good ground and constructed in accordance with NZS 3604 or NZS 4229, pipe trenches which are open for no longer than 48 hours shall be located on closer than distance ' $V$ ' (see figure 14) to the underside of any building foundation. Where the trench is to remain open for periods longer than 48 hours, the minimum horizontal separation shall increase to  $3V$  in all ground except rock.



E1 / AS1 figure 14 – figure 8 G13 / AS2 is the same.

The answer to the original question is not contained in either acceptable solution but is contained in AS / NZS 3500.

Separation or proximity to other services shall be at least 100mm between any discharge pipe and any electrical conduit, electrical wire or cable, gas pipe or water services.

The standard further notes the following:

Separation from underground electrical supply cables or consumer gas pipes

- a. The separation between any underground drain and an electrical supply cable shall be at least -
  - (i) 100mm, provided the electrical supply cable is indicated along its length with orange marker tape complying with AS / NZS 2648.1 and is mechanically protected; or
  - (ii) 600mm where the electrical supply cable is neither indicated nor protected.
- b. The separation between any underground drain and consumer gas pipes shall be at least -
  - (i) 100mm, provided the consumer gas pipe is indicated along its length with marker tape complying with requirements of AS / NZS 2648.1 laid 150mm above the installed pipe and is mechanically protected; or
  - (ii) 600mm where the consumer gas pipe is neither indicated nor mechanically protected.

Notes:

1. Mechanical protection is provided by any of the following: concrete slabs, continuous concrete pour, bricks designed for protecting electrical supply cables.

#### **Separation from underground electrical earthing electrode**

The separation between any underground drain and an electrical earthing electrode, for an electrical supply not exceeding 1000 V, shall be at least 500mm. For an electrical supply exceeding 1000 V, the relevant regulatory authority shall be contacted for a ruling.

#### **Separation from underground communication cable**

The separation between any underground drain and a communication cable shall be at least 100mm.

#### **Separation from other underground services**

The separation between any underground drain and any other service other than consumer gas piping, electrical communication service or water service shall be at least 100mm or 300mm from a stormwater drain exceeding DN 100 (see Figure 3.3).

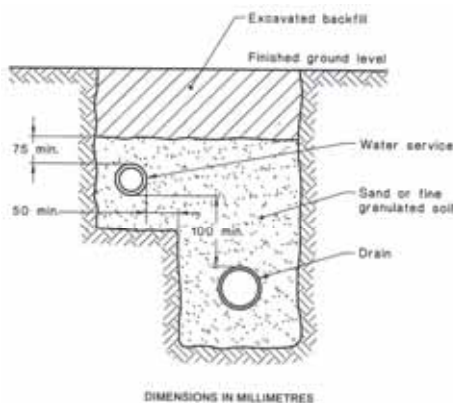
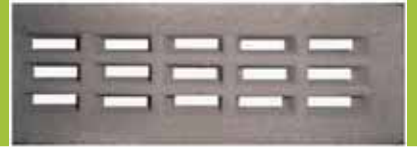


FIGURE 3.3 TYPICAL SHARED TRENCH

## BRICK VENEER – VENTILATION



How much ventilation is required in a brick veneer cavity system and how is this achieved?

Brick veneer has performed extremely well over the years providing a durable cost effective cladding system that requires very little in the way of maintenance.

The standards in New Zealand for the construction of brick veneer are NZS 4236, NZS 4210, NZS 3604 and the Building Code acceptable solution E2 / AS1. There is also manufacturers literature, BRANZ appraisals and various other publications.

Brick veneer is installed on a continuous concrete or concrete block foundation and is fixed with brick ties to the wall framing.

The usual construction of a brick veneer cavity system consists of a cavity of between 40 – 75mm between the wall framing and the back of the bricks.

This cavity is required to be ventilated by installing vent holes at the top of the wall and weep holes at the base of the wall and around windows and doors depending on the size of the windows or doors.

SNZ HB 4236 and NZS 3604 both state the following should be adhered to:

The cavity shall be drained from the bottom by providing weep holes, a minimum of 75mm in height, by the width of the vertical mortar joint, at centres not exceeding 800mm.

Where the first course is less than 75mm in height, the spacing of weep holes shall be decreased to give a ventilation area of 1000mm<sup>2</sup>/m wall length.

The cavity shall be ventilated to the outside by the provision of weep holes at the bottom, and either similar vents at the top; or a continuous 10mm gap between the top course and soffit board. The cavity shall be sealed off from the floor and roof space.

Vermin proofing shall be fitted to the cavity where gaps greater than 13mm exist.

The New Zealand Building Code E2 / AS1 states the following:

Vents at the top and drain holes at the base of the masonry veneer shall be installed in accordance with SNZ HB 4236 and NZS 3604.

Therefore the minimum requirement is to achieve 1000mm<sup>2</sup> of vent holes per lineal metre of wall and 1000mm<sup>2</sup> of weep holes per lineal metre of wall.

The spacings of these holes shall be not exceed 800mm.

This requirement is for when a designer is using NZS 3604 or SNZ HB 4236 to comply with the Building Code.

But is there other documents that could be used?

The two story brick veneer system for Austral Bricks, Canterbury Clay Bricks, Clay Bricks Ltd, Midland Brick and Monier Brick all cite NZS 4210, NZS 3604 and E2.

The Monier plaster presto system specification notes the following:

Install neat 50 x 10mm weep holes at 1.0m centres around the base and top of the veneer. They are not required under windows and only across the top of openings greater than 1.2m.

Weepholes – based on 500sqmm per 1.0 linear metres of wall both top and bottom of the veneer, e.g. a 50mm x 10mm = 50sqmm every 1.0m top and bottom. This is a minimum requirement, larger vents may be used if desired. Note, although this system can be considered as virtually waterproof, the installation of weepholes to permit air movement is important and it is also a point of difference between a Monier Brickmakers clay brick substrate and its competitors.

The above system is brick cladding system for a monolithic plaster finish.

The BRANZ masonry veneer good practice guide notes the vent and weep holes comply with NZS 4210, 4236 and 3604 to achieve 1000mm<sup>2</sup> per lineal meter of wall length.

It also has a brief section on applied finishes but does not specifically mention vent and weep holes in this section.

John Olivers The Brick Book also notes the 1000mm<sup>2</sup> requirement for venting and weep holes and has a section on plastered brick veneer and John notes in his book keep weep holes to a minimum in number and width 50 x 10mm per metre of wall. 500mm<sup>2</sup> per meter of wall, as per the Monier plaster presto system.

There are a number of products on the market that can be used rather than leaving a 75 x 10mm gap in the brick work.

Plastic inserts called KLA vent grey. These given virtually the full air requirement of a gap between their bottom player of bricks 75 x 10 or 750mm<sup>2</sup>.

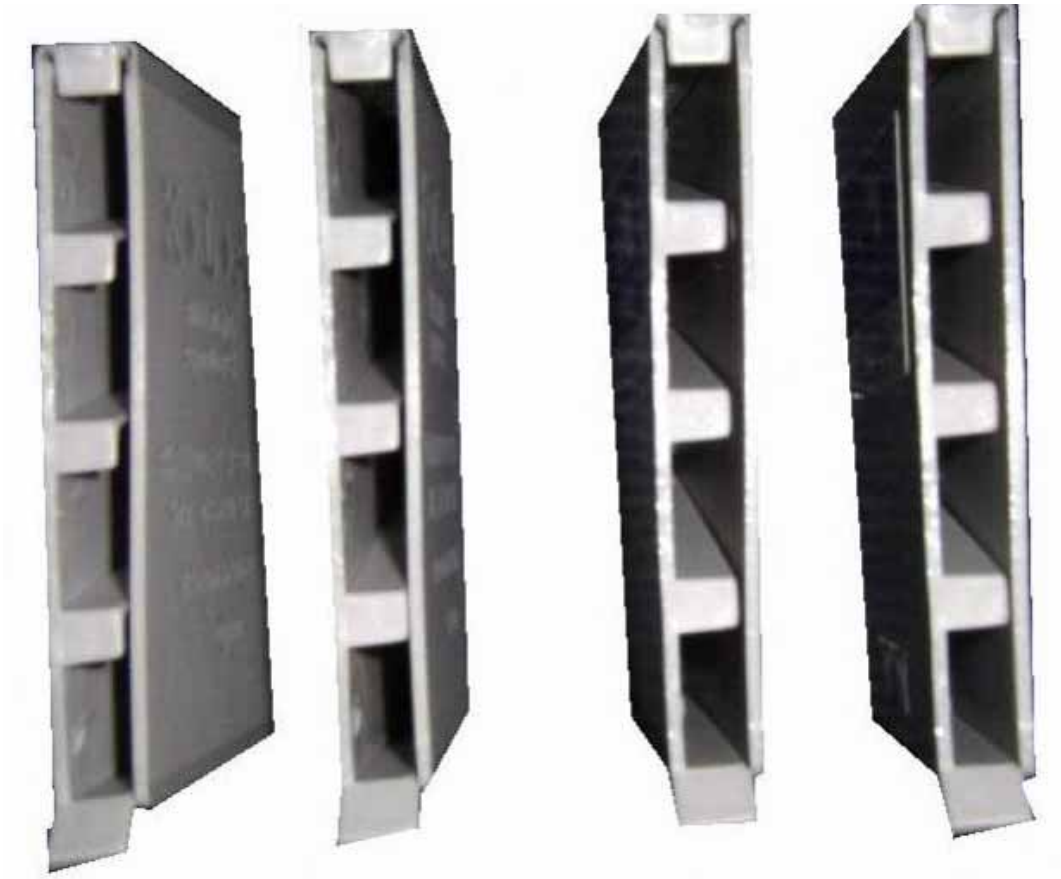
Aluminium weep hole vents 100 x 50mm – louver system metal vents. These louver vents provide approximately 360mm<sup>2</sup> of air movement.

If these aluminium weep hole vents are used or are plastered system the requirement is 500mm<sup>2</sup> per metre of wall, e.g. a 4.0m long wall would require 1000mm<sup>2</sup> per lineal metre of wall under NZS 3604 or NZS 4236.

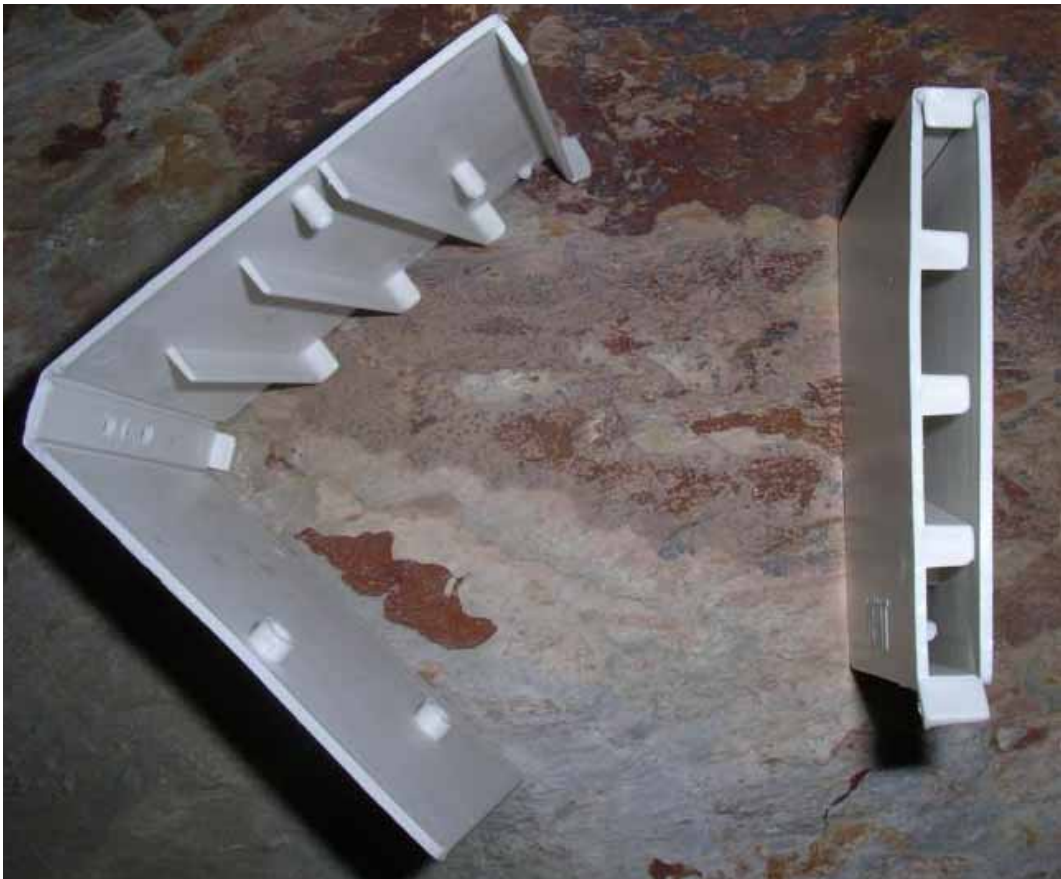
Leaving a gap 75 x 10 = 750mm<sup>2</sup> would require (5.3) or 6 gaps to meet the 4000mm<sup>2</sup> requirement. If the 4.0m long wall was in a plastered painted system the requirement would be 500mm<sup>2</sup> per lineal metre.

As the metal weep hole vent has a 360mm<sup>2</sup> area then (5.5) or 6 metal vents would be required.

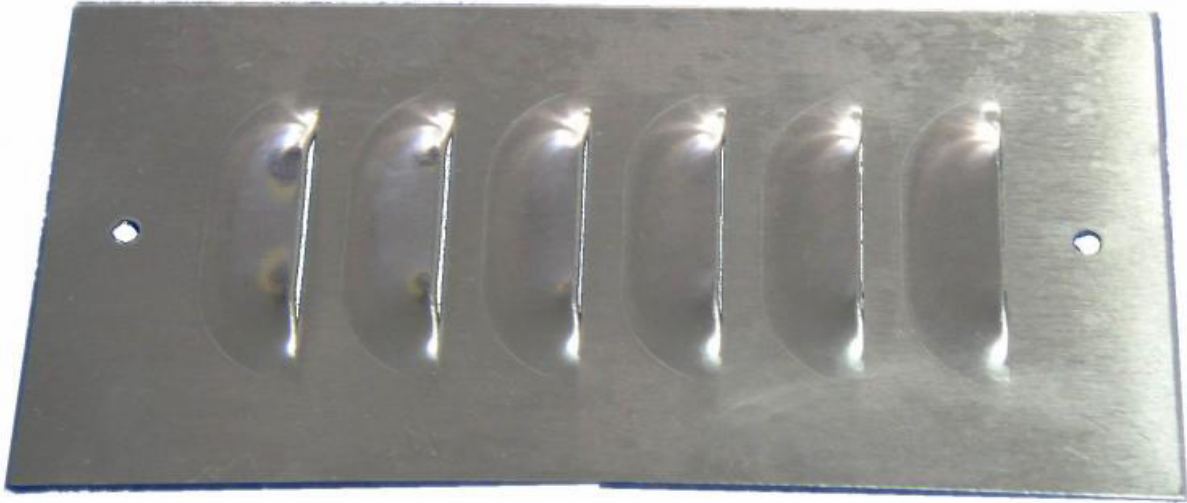
Obviously the designer or bricklayer would need to determine exactly where the weep hole vents are to be placed for aesthetic reasons and to meet the minimum air movement requirements.



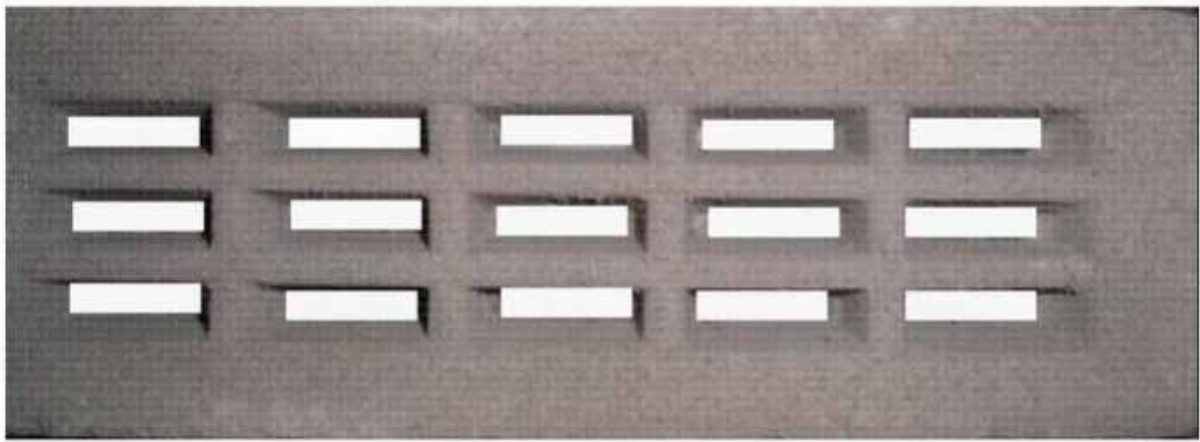
KLA Vent



KLA Vent Grey

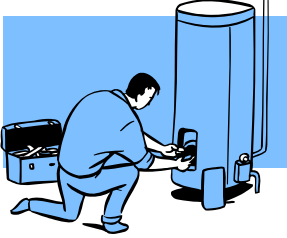


Aluminium Weephole Vent



Brick Vent

## HOT WATER SAFETY



### **How hot is too hot?**

In many New Zealand homes, the most dangerous liquid is in the bathroom and kitchen taps. Luckily, as far as home hazards go, it's also one of the easiest to fix.

Around 40% of our homes have dangerously hot water, which means there are more than 560,000 accidents waiting to happen from hot water burns. The ideal temperature for water is 55 degrees Celsius when it comes out of the tap, but 60 degrees in your cylinder. It needs to be at least 60 degrees in the cylinder to keep bacteria from growing, which could make you sick.

A tempering valve on your hot water system adjusts the temperature so that while the water in your tank is hot enough to stop harmful bacteria, it's cool enough not to scald you or your children when it comes out the tap.

If you think your water is too hot, you probably need to turn down your hot water cylinder's thermostat.

The safest way to do that is to get in a registered plumber. They can tell you about other hot water safety measures too, such as temperature shut-off devices, programmable temperature controls, and adding a tempering valve if your system doesn't have one.

It's an easy step to take and sure beats the alternative of being injured!

Children are particularly susceptible to scalds because their skin burns faster than adults'. Each year the equivalent of two classrooms of children are hospitalised from hot water burns – burns that could've been easily avoided.

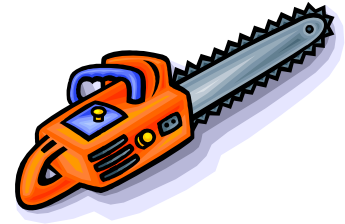
It can also be a good idea to install child-resistant tap attachments. These can be fitted easily to most standard taps and will stop toddlers turning them on. You can pick these up from hardware stores or plumbing shops.

And remember, when you're running a bath for your child, always put the cold in first then add the hot water until it feels about the same heat as your body temperature.

## **CHAINSAW SAFETY**

As a nation of DIYers, many New Zealanders will have a chainsaw lurking somewhere in their sheds, and if they don't have one, it's highly likely their mate has one.

Used correctly, a chainsaw is a very useful tool, but it's also a potentially lethal one. That's why it's worth knowing these ten things about chainsaw safety before you pull the ripcord. These guidelines are easy to remember and they could literally save your life.



1. **Know your capabilities** – Match the size and type of your chainsaw to the job at hand. If you don't feel you have the skills for the job, there's no shame in getting a professional to do it for you. Only a professional should attempt to cut down trees.
  
2. **Check your chainsaw** – Before you start, check:
  - that all parts are lubricated
  - the chain is the right tension
  - the teeth or cutting edges are sharp
  - the depth gauge settings are correct
  - all safety devices are in place and working
  - that there are no loose parts or bolts.

If anything is missing or adjusted incorrectly, don't use the chainsaw – get it repaired.

3. **Gear up** – It's no exaggeration to say that wearing the right safety gear could save your life, so spend the few dollars it takes to buy it and the few minutes it takes to put it on. Chainsaw safety gear includes:
  - protective gloves
  - chaps
  - helmet
  - safety glasses
  - Grade 4 or Class 5 hearing protection
  - solid (preferably steel-capped) boots.
  
4. **Check your work area** – Look for anything that could trip you up, such as electrical cables, or people (especially children) who might get in the way. Also check nothing's going to fall on you while you're working, such as debris from higher up the tree.
  
5. **Never drop- start a saw** – Use the cold start or warm start positions only. If you drop start a saw it could swing in an arc and cause a serious injury.

6. **Watch for kickbacks** – A kickback (when the guide bar is thrown back towards you in an uncontrolled arc) can happen at any time. Usually it happens when the upper part of the bar nose hits a solid object or light material, or when it's pinched while cutting. It can also happen if your chain is loose or the depth gauge setting is too low. Most modern saws have a protective leather mitt attached to the front handle that can protect your hand and help prevent kickback. If your saw has one of these, make sure you use it correctly.
7. **Never cut above shoulder height** – If you do you could lose your balance, you can't see what you're cutting and the chainsaw is more prone to kickbacks.
8. **Hold and use the saw correctly** – Keep two hands on the saw and hold it close to your body, with the body of the saw close to what you're cutting. Plant your feet firmly and slightly apart for balance. Never try to adjust your chain or machine while the engine is running.
9. **Cut only one log at a time** – And remember, chainsaws are designed to cut wood – nothing else.
10. **Maintain your saw** – Good maintenance will extend the chainsaw's life and make it safer to use. When you finish a job make sure the air filters, sprocket cover and chain brake mechanism are free from sawdust; clean the guide bar groove; oil the holes and check everything is in place just as you do each time before you use it.

But the best tip of all is that if you aren't confident using a chainsaw, ask a professional for help!

If you'd like more information on chainsaw safety, download 'A guide to Safety with Chainsaws' from the Department of Labour's website at [www.dol.govt.nz](http://www.dol.govt.nz)

**SEMINAR  
BUILDING ACT 2004**



**SCHEDULE 1 – BUILDING WORK THAT DOES NOT REQUIRE A BUILDING CONSENT**

New exemptions introduced on 23 December 2010.

**Where:** Invercargill City Council  
Council Chambers  
First Floor – Civic Administration Building  
101 Esk Street  
INVERCARGILL

**Date:** 24 January 2011

**Time:** 5.00 – 6.30pm

**Cost:** Nil

**Purpose:** Purpose of seminar to advise any interested parties on what is exempt, how to decide whether work is exempt and guidance on how to comply with the Building Code.

**Audience:** Licensed building practitioners, designers, real estate agents, builders, plumbers, drainlayers, and general public.

Please phone 211 1777 or email [www.building.govt.nz](http://www.building.govt.nz) to book your attendance by 5.00pm, 20 January 2011.

Numbers are required as the Council Chambers have limited seating capacity.

## QUIZ ON ARTICLES IN THIS NEWS SHEET

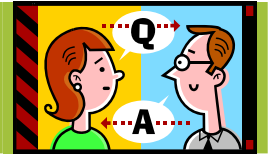


1. What Act is the primary piece of legislation governing buildings in New Zealand?
  - a. The Human Rights Act
  - b. The Resource Management Act
  - c. The Building Act
  
2. A compliance schedule is issued by
  - a. The Department of Building and Housing
  - b. The Territorial Authority – Council or BCA
  - c. The owner
  
3. A warrant of fitness is issued by
  - a. The Department of Building and Housing
  - b. The Territorial Authority – Council or BCA
  - c. The owner
  
4. A compliance schedule is a document that contains information on
  - a. Compliance documents
  - b. Specified systems
  - c. Code compliance certificates
  
5. What form is used by the owner to amend a compliance schedule?
  - a. Form 2
  - b. Form 6
  - c. Form 11
  
6. An independently qualified person (IQP) is approved by who?
  - a. Department of Building and Housing
  - b. Territorial Authority – Council
  - c. Owner
  
7. If your building contains any specified systems you must have
  - a. A building consent
  - b. A code compliance certificate
  - c. A compliance schedule
  
8. If your residential dwelling is fitted with a sprinkler system it is a requirement under the Building Act that
  - a. Yes
  - b. No

9. A specified system is a system as facture that contributes to the proper functioning of the building.
  - a. True
  - b. False
  
10. How long must an owner keep their records of inspection maintenance and repairs on the specified systems in their building.
  - a. 1 month
  - b. 12 months
  - c. 24 months
  
11. What forms must the owner obtain from their IQPs?
  - a. Form 2
  - b. Form 6
  - c. Form 12a
  
12. Under the Building Act does an owner need a building consent prior to undertaking any changes / alterations to the specified systems in their building?
  - a. Yes
  - b. No
  
13. Does an owner have to display the warrant of fitness in the building that the WOF relates to?
  - a. Yes
  - b. No
  
14. Where in the building does the owner have to display the warrant of fitness?
  - a. The managers office
  - b. A place in the building where it can be seen by all users of the building
  - c. Outside the building
  
15. A building warrant of fitness is a declaration by the owner that all the specified systems in the building have been inspected, maintained and reported in accordance with the compliance schedule for a period of \_\_\_\_\_ months prior to the issue date on the warrant.
  - a. 1 month
  - b. 6 months
  - c. 12 months
  - d. 24 months
  
16. Can an owner or owners agent sign a building warrant of fitness if they haven't inspected maintained the specified systems as required by the compliance schedule?
  - a. Yes
  - b. No
  
17. The minimum bedroom size for an old peoples home is
  - a. 6m<sup>2</sup>
  - b. 10m<sup>2</sup>
  - c. 20m<sup>2</sup>

18. Built in wardrobes are not permitted to be installed in an old peoples home bedrooms.
- True
  - False
19. The minimum size of an accessible bedroom is
- 6m<sup>2</sup>
  - 10m<sup>2</sup>
  - 20.6m<sup>2</sup>
20. What New Zealand Standard has the size of accessible bedrooms?
- NZS 3604
  - NZS 4121
  - NZS 7411
21. A brick veneer cavity system constructed under NZS 4210 requires a minimum cavity of \_\_\_\_\_mm.
- 20mm
  - 25mm
  - 40mm
22. A 75 x 10mm weep hole is how many mm<sup>2</sup>?
- 360
  - 750
  - 1000
23. Vent holes are required at centres not exceeding \_\_\_\_\_mm in a brick veneer system.
- 230mm
  - 500mm
  - 800mm
24. What is the requirement for weep holes in mm<sup>2</sup> per lineal metre of wall in a brick veneer cavity system under NZS 3604?
- 200mm<sup>2</sup>
  - 500 mm<sup>2</sup>
  - 1000 mm<sup>2</sup>
25. What is the requirement for weep holes in mm<sup>2</sup> per lineal metre of wall to in the Monier plaster presto system?
- 200 mm<sup>2</sup>
  - 500 mm<sup>2</sup>
  - 1000 mm<sup>2</sup>

## ANSWERS TO QUIZ



- |       |       |
|-------|-------|
| 1. c  | 14. b |
| 2. b  | 15. c |
| 3. c  | 16. b |
| 4. b  | 17. a |
| 5. c  | 18. b |
| 6. b  | 19. c |
| 7. c  | 20. b |
| 8. b  | 21. c |
| 9. a  | 22. b |
| 10. c | 23. c |
| 11. c | 24. c |
| 12. a | 25. b |
| 13. a |       |