NZS 5465:2001
Incorporating Amendment No. 1 and 2

New Zealand Standard

Self containment of motor caravans and caravans

Superseding NZS 5465:1990

NZS 5465:2001

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

Single User PDF Terms & Conditions

You have material which is subject to strict conditions of use. Copyright in this material is owned by the New Zealand Standards Executive. Please read these terms and conditions carefully, as in addition to the usual range of civil remedies available to Standards New Zealand on behalf of the New Zealand Standards Executive for infringement of copyright, under New Zealand law every person who infringes copyright may be liable to a fine of up to $10,000 for every infringing copy or imprisonment of up to 5 years, or a fine of up to $150,000 or imprisonment not exceeding 5 years.

You have access to a single-user licence to read this non-revisable Adobe Acrobat PDF file and print out and retain ONE printed copy only.

We retain title and ownership of the copyright in this PDF file and the corresponding permitted printed copy at all times.

Under this license use of both the PDF file and the single permitted printed copy of this PDF file you may make are restricted to you. Under no circumstances are you permitted to save, sell, transfer, or copy this PDF file, the one permitted printed copy of this PDF file, or any part of either of them.

You undertake that you will not modify, adapt, translate, reverse engineer, decompile, disassemble or create derivative works based on any of the downloaded PDF file, nor will you merge it with any other software or document, even for internal use within your organization.

Under no circumstances may this PDF file be placed on a network of any sort without our express permission.

You are solely responsible for the selection of this PDF file and any advice or recommendation given by us about any aspect of this PDF file is intended for guidance only and is followed or acted upon entirely at your own risk.

We are not aware of any inherent risk of viruses in this PDF file at the time that it is accessed. We have exercised due diligence to ensure, so far as practicable, that this file does not contain such viruses.

No warranty of any form is given by us or by any party associated with us with regard to this PDF file, and you accept and acknowledge that we will not be liable in any way to you or any to other person in respect of any loss or damage however caused which may be suffered or incurred or which may arise directly or indirectly through any use of this PDF file.

Regardless of where you were when you received this PDF file you accept and acknowledge that to the fullest extent possible you submit to New Zealand law with regard to this licence and to your use of this PDF file.

Copyright Standards New Zealand

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

Copyright Standards New Zealand

COMMITTEE REPRESENTATION

This Standard was prepared by Technical Committee P 5465 for the Standards Council established under the Standards Act 1988.

The committee consisted of representatives of the following nominating organisations:

Ron Chippindale	Caravanning Camping New Zealand Inc.
Andrew McArthur	Motor Caravan Manufacturers interests
Bruce Stanger	New Zealand Motor Caravan Association
Harold Thomas	Local Government New Zealand & New Zealand Plumbers Gasfitters & Drainlayers Board
Barry Thomson	New Zealand Motor Caravan Association
Lex Ward	Caravanning Camping New Zealand Inc.
Glenn Wigley	Ministry for the Environment

ACKNOWLEDGEMENT

Standards New Zealand gratefully acknowledges the contribution of time and expertise from all those involved in developing this standard.

COPYRIGHT

The copyright in this document is owned by the Crown and administered by the New Zealand Standards Executive. With the exceptions of Appendices A, C, and D for which separate permissions apply, you may not reproduce any part of it without prior written permission of the New Zealand Standards Executive, unless your actions are permitted by the Copyright Act 1994.

Appendices A, C, and D are licensed under a Creative Commons Attribution-No Derivatives 4.0 International Licence. This means you may use and redistribute the content of only these appendices for commercial or non-commercial purposes, provided that the content is unchanged and you acknowledge that the copyright is owned by the Crown and administered by the New Zealand Standards Executive. For the licence terms please see https://creativecommons.org/licenses/by-nd/4.0/.

We will vigorously defend the copyright in this standard. Your unauthorised use may result in penalties being imposed under the Copyright Act 1994 including fines of up to $10,000 for every infringing copy (up to a maximum of $150,000 for the same transaction and for other specified offences) or imprisonment of up to 5 years. If the breach is serious, we may also seek additional damages from you as well as injunctive relief and/or an account of profits.

Published by Standards New Zealand, PO Box 1473, Wellington 6140.
Telephone: (03) 943 4259, Website: www.standards.govt.nz.

AMENDMENTS

No.	*Date of issue*	*Description*	*Entered by, and date*
1	March 2012	This amendment has made clear the distinction between caravans that are self contained and those that are not. Introduced a sticker for self contained vehicles.	Incorporated in this edition.
2	May 2017	This amendment has refined the minimum requirements of a toilet within a motor caravan and caravan. Amended requirements for an initial self containment certificate. Updated transitional arrangements for the transition period for when the standard is published.	Incorporated in this edition.

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

NZS 5465:2001

Incorporating Amendment No. 1 and 2

New Zealand Standard

Self containment of motor caravans and caravans

Superseding NZS 5465:1990

Copyright Standards New Zealand

ISBN (Print) 978-1-77664-897-9
ISBN (PDF) 978-1-77664-898-6

NOTES

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

Copyright Standards New Zealand

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

CONTENTS ***Page***

Committee representation ..... IFC
Copyright ..... IFC
Related documents 2
Foreword 3
Review of Standards 3

Section

1 General 5
2 Definitions and interpretation 5
3 Plumbing requirements 6
4 Water supply 6
5 Sanitary fittings 9
6 Toilet 10
7 Waste tank or tanks ..... 11 — Amd 2 May '17
8 Evacuation hose 13
9 Waste water treatments 13
10 Solid waste containment ..... 14 — Amd 1 Mar '12
12 Issuing authority 14
13 Testing officers 14
14 Issue of self containment certificate 15
15 Self containment certificate, warrant and sticker ..... 15 — Amd 1 Mar '12
16 Transitional arrangements 16
17 Dump stations 16

Appendix

A Self containment certificate 17
B Dump station installations 18
C Warrant design ..... 20 — Amd 1 Mar '12
D Sticker design 21

Figure

1 Typical plumbing layout for motor caravans and caravans – diagrammatic only 8
B1 Dump point sign 18
B2 Typical dump station installation 19
C1 Warrant design ..... 20 — Amd 1 Mar '12
D1 Sticker design 21

Standards Council approval ..... IBC

Copyright Standards New Zealand

RELATED DOCUMENTS

Reference is made in this Standard to the following:

NEW ZEALAND STANDARDS

AS/NZS 3500:---- National plumbing and drainage
Part 2.2:1996 Acceptable solutions

AUSTRALIAN STANDARDS

AS 2070:1999 Plastics materials for food contact use

OTHER DOCUMENTS

Building Industry Authority. New Zealand Building Code Handbook and Approved Documents.

NEW ZEALAND ACTS AND REGULATIONS

Amd 1 Mar '12

Freedom Camping Act 2011
Land Transport Act 1998
Plumbers, Gasfitters, and Drainlayers Act 1976
Resource Management Act 1991
Resource Management (Infringement Offences) Regulations 1999

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

Copyright Standards New Zealand

COPYRIGHT © Standards New Zealand

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

FOREWORD

The objective of this Standard is to set out a basic Standard for the containment of waste water and solid waste to help provide a solution to the problems associated with the use of motor caravans and caravans in areas where there are no sewage disposal facilities.

The Freedom Camping Act 2011 was introduced to encourage responsible freedom camping and provide consistent laws across New Zealand. New local authority camping-related bylaws will be prepared in 2012 that will reference the Act and it is important that a clear distinction be made between vehicles that are self contained in accordance with this Standard and those that are not. The Department of Conservation will gazette areas on public conservation land where restrictions on freedom camping are necessary due to a history of problems caused by inappropriate camping. Amd 1 Mar '12

The revised Standard is a revision and update of NZS 5465:1990 *Self Containment of Caravans, Motor Caravans and Boats* with boats now deleted from its scope.

The revised Standard is intended to provide for the containment of solid waste, toilet waste and grey waste water, resulting from the approved number of occupants' daily activities, and to supply their minimum fresh water needs, for at least three days.

Compliance with this Standard is not compulsory but compliance will enable the vehicle to be occupied in some areas to which entrance would otherwise be denied. Compliance will be confirmed by a self containment certificate and mandatory display of the warrant. The procedure for issuing Self Containment Certificates is part of this Standard. Amd 1 Mar '12

Recognition of the Standard in Territorial Authority Plans including Reserve Management Plans will provide a ready means for proprietors of camping sites which do not have sewage disposal facilities to control the environmental impact of overnight stays with limited or no external facilities.

Amendment No. 2 of NZS 5465 was driven by a need for further clarification on the minimum requirements for a toilet within a motor caravan or caravan, to help to ensure that self containment certificates and warrants are issued in line with a consistent interpretation of the standard. This will ensure that the local environment of areas where freedom camping is restricted to self containment vehicles is less likely to be negatively impacted as all certified vehicles will have adequate and accessible waste facilities on board the vehicle. This shall be confirmed whenever inspected for compliance. Amd 2 May '17

REVIEW OF STANDARDS

Suggestions for improvement of this Standard will be welcomed. They should be sent to the Manager, Standards New Zealand, PO Box 1473, Wellington 6140.

Copyright Standards New Zealand

NOTES

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

Copyright Standards New Zealand

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

NEW ZEALAND STANDARD

SELF CONTAINMENT OF MOTOR CARAVANS AND CARAVANS

1 GENERAL

1.1 Scope

This Standard specifies the requirements for water supply, sanitary plumbing and drainage installation and solid waste containment in motor caravans and caravans for the purpose of obtaining a self containment certificate.

1.2

This Standard supersedes NZS 5465:1990.

1.3 Objectives

1.3.1 *Vehicle equipment*

The objective of this Standard is to define the minimum facilities that a motor caravan or caravan needs to contain the waste which its occupants produce, and to provide the fresh water which they require, for a minimum of three days.

1.3.2 *Approval scheme*

This Standard specifies the requirements for certifying that a vehicle meets this Standard.

1.3.3 *Dump stations*

This Standard defines minimum requirements of dump stations for servicing vehicles that have a self containment certificate.

2 DEFINITIONS AND INTERPRETATION

2.1 Definitions

For the purpose of this Standard, the following definitions shall apply:

CARAVAN. Any structure designed for human habitation, which is capable of being moved from one place to another, by being towed, or transported on another vehicle.

MACERATOR PUMP. A pump, which pulverizes waste.

MOTOR CARAVAN. A motor caravan is a motor vehicle, which can be used as a place of abode and contains facilities for cooking, eating, sleeping and washing, and is not a passenger service vehicle.

NZBC. New Zealand Building Code.

POTABLE WATER. Any water that is fit for human consumption.

SANITARY FITTING. A sanitary accessory like sink, handbasin, and shower.

SELF CONTAINMENT. The ability to meet the ablutionary and sanitary needs of the occupants of the motor caravan or caravan for a minimum of three days without requiring any external services or discharging any waste.

Copyright Standards New Zealand

TOILET (types).

CASSETTE TOILET. A fixed toilet with a removable holding tank.

Amd 2 May '17

COMPOSTING TOILET. A toilet that is an aerobic processing system to treat human waste, by composting. Where any waste water is separated it shall be via a black water tank.

EFFICIENCY FLUSHING TOILET. A toilet which is flushed by a small volume of water.

MARINE TOILET. A fixed flushing toilet with a macerator pump, either manual or electrically operated.

Amd 2 May '17

PERMANENT TOILET. A toilet that is permanently fixed inside the motor caravan.

PORTABLE TOILET. A toilet with its own holding tank, the toilet is not fixed to the motor caravan or caravan.

WASTE WATER. Includes both grey water and black water.

BLACK WATER. Any water that contains human body waste.

GREY WATER. Any waste water that does not contain any human body waste.

2.2 Interpretation

2.2.1

In this Standard, the word "shall" identifies a mandatory requirement for compliance with the Standard. The word "should" refers to practices which are advised or recommended.

Amd 1 Mar '12

The terms "Normative" and "Informative" have been used in this Standard to define the application of the Appendix to which they apply. A "Normative" Appendix is an integral part of a Standard while an "Informative" Appendix is only for information and guidance.

2.2.2

Clauses prefixed by "C" and printed in italic type are comments, explanations, summaries of technical background, recommended practices or suggested approaches which satisfy the intent of the Standard. These clauses are not to be taken as the only or complete interpretation of the corresponding clause. The Standard can be complied with if the comment is ignored.

2.2.3

All measurements quoted in the Standard are nominal metric dimensions. The nearest imperial size is acceptable.

3 PLUMBING REQUIREMENTS

All installations shall comply with the sanitary requirements of the New Zealand Building Code (NZBC) Clause G13 Foul Water. Compliance may be by use of the Acceptable Solution AS1 or use AS/NZS 3500.2.2 as a verification, unless otherwise specified in this Standard.

4 WATER SUPPLY

4.1 Water supply tank or tanks

4.1.1

The motor caravan or caravan shall be fitted with a water supply tank or tanks having a capacity of not less than 4 L per day for each of the number of persons authorised by the Self Containment Certificate, for not less than three days (i.e. a minimum of 12 L per person).

COPYRIGHT © Standards New Zealand

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

Copyright Standards New Zealand

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

4.1.2
The water supply tank or tanks shall be made of a non-toxic and opaque material, capable of storing water while maintaining its potability.

If permanently connected to the public water supply, and are pressurized or gravity fed, the inlet to the motor caravan or caravan shall be fitted with a backflow prevention device.

4.1.3
All tanks shall:

(a) Be adequately supported and secured to avoid creating any hazard, while the motor caravan or caravan is in motion;

(b) Have an inlet of not less than 25 mm diameter, fitted with a seal capable of preventing the entry of foreign matter into the tank or tanks. Should the tank be pressure fed, 12 mm diameter is acceptable;

(c) If of rigid construction, have an air vent of not less than 6 mm diameter, protected so as to prevent the entry of any contaminant;

(d) Where the supply system relies on tank pressurization an air vent is not required;

(e) Should a mains pressure system be fitted a 12 mm inlet is acceptable (this should not pass through the tank).

C4.1.3
Transportable individual containers are acceptable.

Air vents larger than the 6 mm minimum will permit more rapid filling of the tank.

Drawn water shall not be returned to the main as per Clause 2.1.1 of NZBC G12/AS1 Water Supplies.

Tanks, especially the larger ones should have baffles fitted to enhance the rigidity of the tank and prevent surging that may affect vehicle stability.

4.2 Water reticulation
Potable water reticulation in all installations shall be in non-toxic and opaque material. Materials should comply with AS/NZS 3500, AS 2070 or equivalent, and be suitable for contact with potable water. The use of clear plastic pipe is not permitted.

C4.2
Clear plastic admits light which encourages the growth of algae in the pipe, which discolours the water, and may be harmful.

Where a water heating device such as a califont heater is installed it is recommended that the hot water reticulation be carried out in 10 mm copper tubing. This tubing, being soft-drawn is easily routed around corners and can be installed as one continuous length from califont to faucet. The flow of water through such a pipe is more than adequate as a califont restricts the water flow so that it will heat whilst exposed to the gas flame. A larger diameter pipe will hold a fair proportion of cold water which is a waste when used in conjunction with a supply of limited proportions.

Figure 1 shows a typical schematic plumbing layout for motor caravans and caravans.

Copyright Standards New Zealand

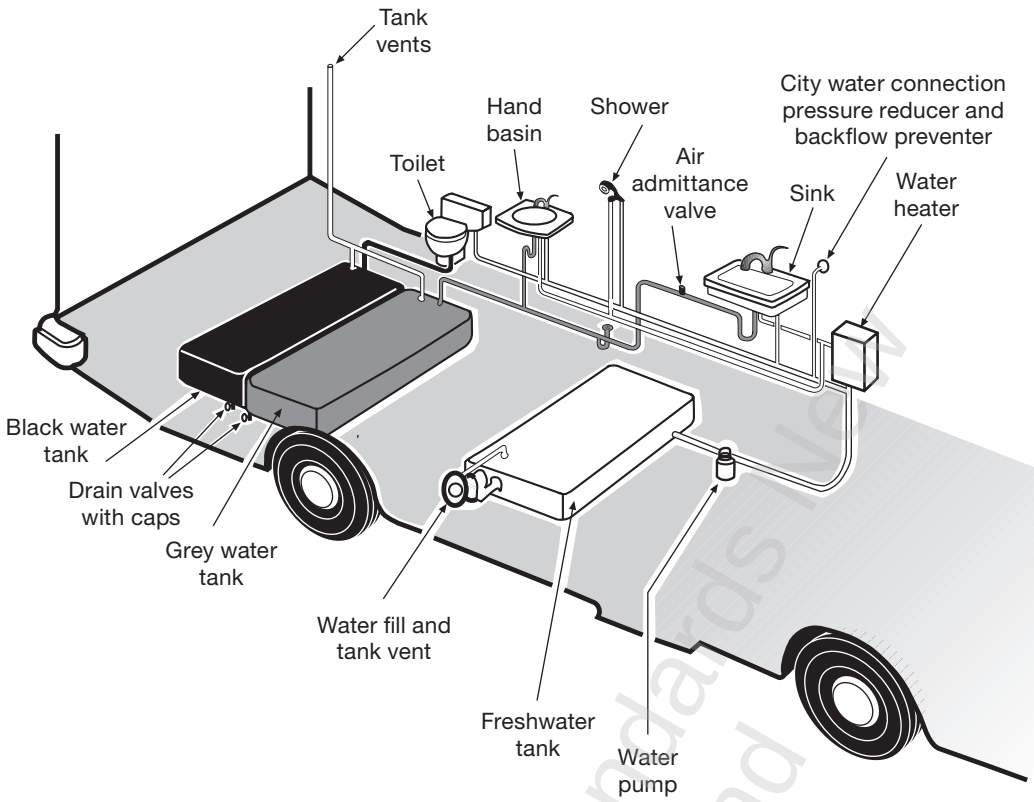


Figure 1 - Typical plumbing layout for motor caravans and caravans – diagrammatic only

NOTE – With storage water heaters an inlet pressure regulator and a pressure relief valve will be necessary.

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

Copyright Standards New Zealand

COPYRIGHT © Standards New Zealand

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

5 SANITARY FITTINGS

5.1 Minimum requirement

The motor caravan or caravan shall be equipped with a sink. Additional sanitary fittings, like a handbasin, shower etc. are optional.

5.2 Return water

Sanitary fittings shall be supplied from the water supply in such a way that the return of water by backflow or cross connection into the supply tank is prevented.

5.3 Water seal

5.3.1

Every waste pipe draining any sanitary fitting shall have a water seal located as close as practicable to the sanitary fixture that it serves. The total length of the pipe between the fixture and the seal shall not exceed one metre from the fitting being served.

5.3.2 *Depth of seal*

Every waste pipe shall have a seal that complies with the sanitary requirements of the NZBC.

C5.3.2

The water seal should never be less than 40 mm and it is recommended that it should be not less than 70 mm, and may include an automatic air admittance valve.

5.4 Waste pipe length

Where the length of the waste from any sanitary fitting to the waste tank:

(a) Does not exceed 3 m, the diameter shall be not less than 18 mm;

(b) Exceeds 3 m, the diameter of the pipe shall be not less than 25 mm and be vented or fitted with an automatic air admittance valve;

  (i) Any vent shall be not less than 18 mm diameter and shall comply with clause 7.8.2

  (ii) Any automatic air admittance valve shall terminate above the water seal. The branch to the air admittance valve shall be within 200 mm of the water seal.

C5.4

The vent pipe or air admittance valve is to ensure that the water seal is not lost when the handbasin or other fitting is emptied into the waste tank.

5.5 Recirculating toilets and showers

Where toilets and showers re-circulate, the outlet from the holding tank shall be mounted so that there is an air gap between the appliance inlet to prevent the back siphoning of soiled water.

The fresh water supplying the holding tank must have an air gap between the appliances.

C5.5

A tap close to these appliances facilitates recharging them with water.

Copyright Standards New Zealand

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

6 TOILET

6.1 Minimum requirements

6.1.1

The motor caravan or caravan shall be equipped with a toilet that is adequately restrained or secured when travelling. The toilet shall be usable within the vehicle, including sufficient head and elbow room whenever required, even with the bed made up.

Where permanent toilets are installed, this shall be in accordance with the manufacturer's instructions and comply with the sanitary requirements in section 3.

6.1.2

Amd 2 May '17

When the conditions of 6.1.1 are met, a portable toilet may be used externally (e.g. within a toilet tent or awning, where it is appropriate and convenient to do so).

6.2 Efficiency flushing toilets

Where an efficiency flushing toilet is permanently installed it shall be connected to the waste tank by an evacuation pipe, preferably of flexible material or with flexible joints. Where evacuation is by gravity, the pipe shall be not less than 75 mm in diameter and not deviate from the vertical by more than 30°.

6.3 Toilets

All toilet systems shall provide sufficient waste holding capacity for the occupants of the motor caravan or caravan for a minimum of three days. The waste holding capacity shall be the net capacity after deducting the initial charge, or the internal flushing water. The minimum capacity required per person, per day, shall be one litre.

C6.3

One litre per day is a minimum and requires careful management to ensure that emptying is not required in less than three days.

Example:
A manufacturer states for a portable toilet – capacity of waste water is 20 L.
Less initial charge, say 1 L, remaining capacity 19 L.
6 people @ 1 L for 3 days = 18 L.
The waste holding capacity is satisfactory for 6 people.

6.4 Marine type toilets

Under no circumstances shall a marine type toilet, used in a motor caravan or caravan draw its flushing water from the drinking water supply.

C6.4

The barrel of a marine toilet pump is used for pumping both the waste to the waste tank, and drawing in the flushing water. It is therefore unavoidable that contamination will travel from the waste to the clean water supply. To use marine toilets in mobile installations, the following options are available:

(a) Have a separate tank with flushing water available;

(b) Use the re-circulating system, by drawing filtered water out of the waste tank.

6.5 Self composting toilets

Self composting toilets shall comply with the sanitary requirements of the NZBC.

Copyright Standards New Zealand

COPYRIGHT © Standards New Zealand

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

7 WASTE TANK OR TANKS

7.1 Minimum requirement

7.1.1
The motor caravan or caravan shall be provided with a waste tank or tanks to receive all the waste water from all permanently installed fixtures. The capacity of the waste tank shall not be less than, and preferably larger than, the minimum water supply as per 4.1.1.

7.1.2
A motor caravan or caravan may have a removable grey water tank provided the waste pipe that feeds the tank has a shut-off valve and cap. There shall be a watertight seal between the grey water tank and the connecting pipe of the vehicle. The tank outlets and orifices shall be fitted with caps and shall be vented as per 7.8.

C7.1.2
Recommend maximum size of portable tanks is 20 L as lifting a larger tank is difficult. 1 L is equal to 1 kg.

The caps are intended to stop leakage when the tank is removed.

7.1.3
Storage of the portable tank or tanks whilst travelling shall be such that the restraints shall be able to withstand a load equal to 4 times the mass of the waste tank and contents.

C7.1.3
All tanks, especially the large ones should have baffles fitted to enhance the rigidity of the tank and prevent surging that may affect vehicle stability.

7.2 Level indicators
Where the capacity of the supply tanks is greater than the waste tanks there shall be a functioning level indicator fitted to each waste tank. The level indicator shall be clearly visible while conducting normal activities within or around the vehicle (e.g. without needing to look beneath the vehicle).

7.3 Material
The waste tank shall be constructed of a non-corrodible material.

C7.3
Tanks, especially the larger ones should have baffles fitted to enhance the rigidity of the tank and prevent surging that may affect vehicle stability.

7.4 Location of discharge
In a motor caravan or caravan installation the outlet pipe should be located as close as practicable to the lowest point of any fixed tanks.

7.5 Discharge valves
For a black water tank a quick acting valve is mandatory. For grey water tanks a gate valve is acceptable. The valve shall not be capable of operation from inside the vehicle. The outlet shall have a cap fitted when not in use.

C7.5
The flow should be established quickly to maximize the discharge from the waste tank, and ensure that the maximum amount of waste is removed.

Copyright Standards New Zealand

7.6 Evacuation of tanks

7.6.1
For grey water tanks or combinations of grey water tanks connected together:

(a) Tanks up to 200 L shall have a discharge pipe and valve with a minimum diameter of 25 mm;

(b) Tanks over 200 L shall have a discharge pipe and valve with a minimum diameter of 32 mm.

7.6.2
Black water tanks, or combinations of black water tanks that are connected together and contain waste that has not been macerated with a macerator pump, shall have a discharge pipe and valve with a minimum diameter of 75 mm.

7.6.3
For black water tanks or combinations of tanks that are connected together and contain waste fed from a macerating marine toilet, or via a stand alone macerator pump, the discharge pipe and valve shall have a minimum diameter of 32 mm.

7.6.4
Waste macerated on evacuation shall have a minimum pipe and valve diameter of 18 mm, unless 18 mm is less than the diameter of the discharge from macerator pump, or the size of the macerator pump openings in which case the pipe and valve diameter shall not be less than that of the opening to which it is connected.

7.6.5
Each discharge pipe on waste tanks shall be fitted with a sealing cap.

7.7 Macerator pumps
Where a motorised macerator pump is fitted for evacuating a waste water tank it shall be connected to the lowest point of the tank. The pump shall be installed in accordance with the manufacturer's instructions and fully protected from stones and obstructions on the roadway.

7.8 Waste tank vents

7.8.1
Every waste tank shall be vented. The minimum size of such a vent shall be 10 mm. The preferred size is 25 mm.

7.8.2
The vent shall terminate outside the vehicle (preferably through the roof or near the roof line) away from any door, window or opening, and extend above the flood level (overflow) of the lowest sanitary fitting.

7.8.3
Where a macerator pump or waste evacuation hose larger than 50 mm diameter is used to empty a waste tank(s) the system shall be fitted with an automatic air admittance valve or a vent of not less than 32 mm diameter. (This is not a requirement where there are no traps emptying into the tank.)

C7.8
The vent pipe or air admittance valve is to prevent water traps losing their water seal or the tanks imploding during tank evacuation.

7.9 Attachment
All tanks shall be adequately secured while the motor caravan or caravan is in motion. The evacuation valve or macerator pump shall be mounted to prevent accidental damage.

COPYRIGHT © Standards New Zealand

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

Copyright Standards New Zealand

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

8 EVACUATION HOSE

8.1 Minimum requirements

8.1.1
Any vehicle fitted with a waste tank shall be supplied with an evacuation hose. The hose shall have a leak-proof coupling for attaching it to the holding tank evacuation valve. For a 75 mm black water connection, a bayonet coupling to connect to a dump point is required (see Appendix B and figure 2).

8.1.2
The hose diameter shall not be less than the minimum valve size appropriate for the tank (7.6.1, 7.6.2, 7.6.3), have a minimum length of 3 m and be carried in a separate container.

C8.1.2
A separate container is required for the hose to contain any bacteria that may be left on the hose after evacuating the tanks. A strong sealable plastic container is sufficient or a separate locker.

9 WASTE WATER TREATMENTS

Chemical or biological treatments should be used in a waste tank.

C9
All waste water should be treated with a biodegradable product in the quantities specified by the manufacturer of the product.

The purpose of chemical or biological treatments used in a waste tank is to:

(a) Deodorize the waste;

(b) Disintegrate the solids;

(c) Be bio-degradable;

(d) Eliminate coliform bacteria;

(e) Prevent foaming at pumping stations;

(f) Avoid interference with the safe operation of a septic tank or other sewage treatment; and

(g) Avoid affecting component parts of the sanitation system.

The manufacturer's instructions should be followed as to correct use and dosage.

All waste water should be disposed of in an approved waste disposal dump point or sewerage drain.

The unauthorized discharge of effluent from motor caravans or caravans onto land, or directly into waterways, is an offence under the Resource Management Act 1991, and may be subject to prosecution.

The Resource Management (Infringement Offences) Regulations 1999 provide for infringement notices that can be issued by Regional Councils if a person is caught indiscriminately dumping waste. Travelling with waste tank valves open could fall into this category. Infringement notices are similar to instant fines, and the penalties are $300 for discharging onto land or $750 for discharging into water or onto land where it can reach water.

Copyright Standards New Zealand

Section 42 of the Land Transport Act 1998 provides that a person operating a motor vehicle on a road commits an offence if the person fails to ensure that any load carried in or on the vehicle, or in or on a vehicle being towed by a vehicle driven by the operator, is secured and contained in such a manner that it cannot fall or escape from the vehicle. If a person is convicted of an offence against this section the maximum fine for an individual is $2000 and the court may disqualify the person from holding a driver's licence for such period as the court thinks fit.

10 SOLID WASTE CONTAINMENT

The motor caravan or caravan shall have a sealable solid waste container for rubbish.

Amd 1 Mar '12

12 ISSUING AUTHORITY

12.1 Who may act

A self containment issuing authority shall be one of the following:

(a) A plumber registered under the Plumbers, Gasfitters, and Drainlayers Act 1976; or

(b) A suitably qualified person, registered under the Plumbers, Gasfitters, and Drainlayers Act 1976; or

(c) Any organization that operates a scheme of qualification for testing officers who shall be members of the organization concerned. Documentation of this qualification scheme shall be made available on a public website or to any party on request as evidence that testing officers are competent to certify to this Standard.

Amd 1 Mar '12

Amd 1 Mar '12

13 TESTING OFFICERS

13.1 Persons registered under the Act

Any registered plumber or suitably qualified person, registered under the Plumbers, Gasfitters, and Drainlayers Act 1976 may act as a testing officer under this Standard.

Amd 1 Mar '12

13.2 Testing officers approved by organization

For a person who does not satisfy 13.1, to qualify as a testing officer, they shall:

(a) Be a member of an organization that is an issuing authority in accordance with 12.1;

(b) Be duly nominated by that organization;

(c) Have attended a course of instruction, and be tested to prove their competence to ensure the uniform interpretation of this Standard;

(d) Have documentation issued by their organization to demonstrate (a) through (c), and show this documentation on request to the owner of the vehicle to be inspected;

Amd 1 Mar '12

(e) Posting of this documentation on a public website is recommended but not required.

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

Copyright Standards New Zealand

COPYRIGHT © Standards New Zealand

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

14 ISSUE OF SELF CONTAINMENT CERTIFICATE

14.1 Initial self containment certification

A self containment certificate may be obtained by:

(a) Payment of the appropriate fee; and

(b) Presenting the vehicle to two testing officers, or one testing officer where that testing officer meets the requirements of 12.1(a) or 12.1(b); and

(c) Being certified as complying with this Standard by two testing officers, or one testing officer where that testing officer meets the requirements of 12.1(a) or 12.1(b); or

(d) Being certified as complying with this Standard by one testing officer who has inspected 20 vehicles, provided they perform a minimum of 10 inspections per year.

Amd 2 May '17

14.2 Renewal of self containment certificate and warrant

Renewal of a self containment certificate may be obtained by:

(a) Payment of the appropriate fee; and

(b) Presenting the vehicle to a testing officer; and

(c) Presenting the testing officer with a previous copy of the self containment certificate; and

(d) Being certified by the testing officer as complying with this Standard.

14.3 Modifications or alterations

A renewal self containment certificate is required following any modifications or alterations to any item covered by the self containment certificate.

14.4 Issue of self containment certificates

Self containment certificates shall be issued only by an issuing authority.

15 SELF CONTAINMENT CERTIFICATE, WARRANT AND STICKER

15.1 Self containment certificate

A self containment certificate shall list the equipment fitted and the number of people the vehicle's fresh and waste containment system is capable of supporting. The self containment certificate shall be of the form given in Appendix A.

This is to provide enforcement staff with backup documentation if they doubt the veracity of the warrant sticker.

This certificate shall be kept (but need not be displayed) inside the certified vehicle.

15.2 Self containment warrant

On the completion of obtaining a self containment certificate a self containment warrant shall be issued.

The warrant shall clearly state:

(a) The registration number of the vehicle;

(b) The date of issue;

(c) The issuing authority;

Amd 1 Mar '12

Copyright Standards New Zealand

(d) The maximum number of people for which the vehicle is self contained;

(e) The expiry date (being 48 months from date of issue if no alterations are made to the vehicle); and

(f) The website where a copy of the certificate may be viewed (if available).

Such warrants shall be affixed to the inside left of the front window, or the inside left of the windshield, with the warrant details facing outwards, and shall be of the form given in Appendix C.

15.3 Self containment sticker

On meeting the requirements for a self containment certificate a self containment sticker shall be issued.

Testing officers should be able to place the sticker once certifying a vehicle as meeting the self containment requirements of this Standard.

The sticker shall be in the form given in Appendix D and may be affixed to the bottom right-hand corner of the rear window, or right-hand side of the rear bumper of the vehicle, so that it is clearly visible at all times. Failure to display a self containment sticker is not a breach of the Standard.

15.4 Term of validity

Amd 1 Mar '12

No self containment certificate shall be valid for more than 48 months.

16 TRANSITIONAL ARRANGEMENTS

The following transitional arrangements have been established to manage the changes introduced in Amendment No. 2 to NZS 5465:

(a) All existing self containment warrants and certificates issued in accordance with NZS 5465 Amendment No. 1 shall remain valid until their inscribed expiry date;

(b) From 1 February 2018, NZS 5465 Amendment No. 2 will come into effect for all new certifications and renewals;

(c) New self containment certifications and renewals for vehicles that meet NZS 5465 Amendment No.1 and do not meet NZS 5465 Amendment No. 2 shall be certified until 31 January 2018;

Amd 2 May '17

(d) Vehicles presented for self containment certification that meet NZS 5465 Amendment No. 2 shall be certified for 4 years.

17 DUMP STATIONS

Dump stations that comply with Appendix B are suitable for receiving the discharge of waste water from vehicles that have a self containment certificate.

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

Copyright Standards New Zealand

COPYRIGHT © Standards New Zealand

APPENDIX A
SELF CONTAINMENT CERTIFICATE (Normative)

This certificate is issued under NZS 5465:2001, *Self Containment of Motor Caravans and Caravans*

Name of Owner .....

Postal Address .....

Reg. No. ..... Year of Vehicle ..... Make of Vehicle .....

Previous Certificate issued on ……../……../…….. (If this is a renewal).

SINK Waste dia: …….mm Length: …… mm Air Admittance valve: Y/N Water seal: Y/N

HANDBASIN Waste dia: …….mm Length: …… mm Air Admittance valve: Y/N Water seal: Y/N

SHOWER Waste dia: …….mm Length: …… mm Air Admittance valve: Y/N Water seal: Y/N

(NB: an air admittance valve or 18 mm back vent is required on any waste over 3 m in length)

TOILET Type: Portable/Cassette/Fixed Make:..... Model: .....

If fixed: Waste dia: …… mm Pump installed: Y/N Type of pump: Manual / Macerator

(must be 75 mm unless pump is installed)

If portable or cassette: Holding tank capacity: …… litres (refer to 6.3)

FRESH WATER TANK 1 …… litres Monitor: Y/N Inlet: …… mm Vent: …… mm

Material: ..... Type of Support: ……

FRESH WATER TANK 2 …… litres Monitor: Y/N Inlet: …… mm Vent: …… mm

Material: ..... Type of Support: ……

WASTE TANK 1 Grey/Black .....litres Monitor: Y/N Vent: …… mm

Material: ..... Type of Support: ……

Release valve dia: …… mm Evac. hose dia: …… mm

Evac. hose length: …… metres

WASTE TANK 2 Grey/Black …… litres Monitor: Y/N Vent: …… mm

Material: ..... Type of support: ……

Release valve dia: ……... mm Evac. hose dia: …… mm

Evac. hose length: …… metres

Separate hose container: Y/N Sealable solid waste container: Y/N

Caps on waste valves: Y/N

Maximum number of occupants allowed under this certificate: .....

Signed ..... *Signed* .....

Date ..... *Date* .....

Testing Officer Reg. No. ..... *Testing Officer Reg. No.* .....

ISSUING AUTHORITY .....

Alterations to any of the above items require renewal of the certificate. Renewal needs only 1 testing officer.

A copy of this certificate may be viewed and downloaded from this website:.....
(if none, state “not available”)

Amd 1 Mar ’12

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

Copyright Standards New Zealand

APPENDIX B
DUMP STATION INSTALLATIONS (Normative)

B1
Dump stations for the disposal of waste water from the waste tanks of motor caravans and caravans having self containment certificates in accordance with this Standard shall comply with the following minimum requirements.

B2
The station shall be on an unfloodable level site with a good vehicular access and egress and should be clearly marked with signs complying with figure B1.

B3
The station shall consist of:

(a) A self cleansing unit of at least 600 mm x 500 mm with an upstand surround of not less than 100 mm, or on sealed surfaces 25 mm with a gradient to the outlet of at least 1 in 60.

NOTE – For current drainage regulations refer to Acceptable Solution G13/AS2.

(b) The following shall be mounted in the base:

(i) A 75 mm diameter bayonet coupling

(ii) A 75 mm diameter cap to seal the bayonet coupling

(iii) A 100 mm N.B. floor waste outlet with protective grate; or

(iv) A 100 mm N.B. sewer pipe with a water seal.

(c) Mounted over the base shall be:

(i) A water standpipe with the tap, and backflow prevention device as approved by the local authority consent not less than 450 mm above the base;

(ii) A flexible hose of not more than 300 mm length attached to the tap.

B4
The installation shall be connected to a waste water treatment system and shall comply with all appropriate regulatory and bylaw requirements.

B5
A typical dump station is illustrated in figure B2.

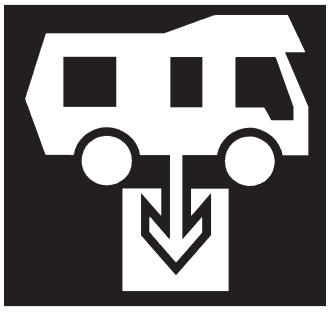


Figure B1 - Dump point sign

COPYRIGHT © Standards New Zealand

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

Copyright Standards New Zealand

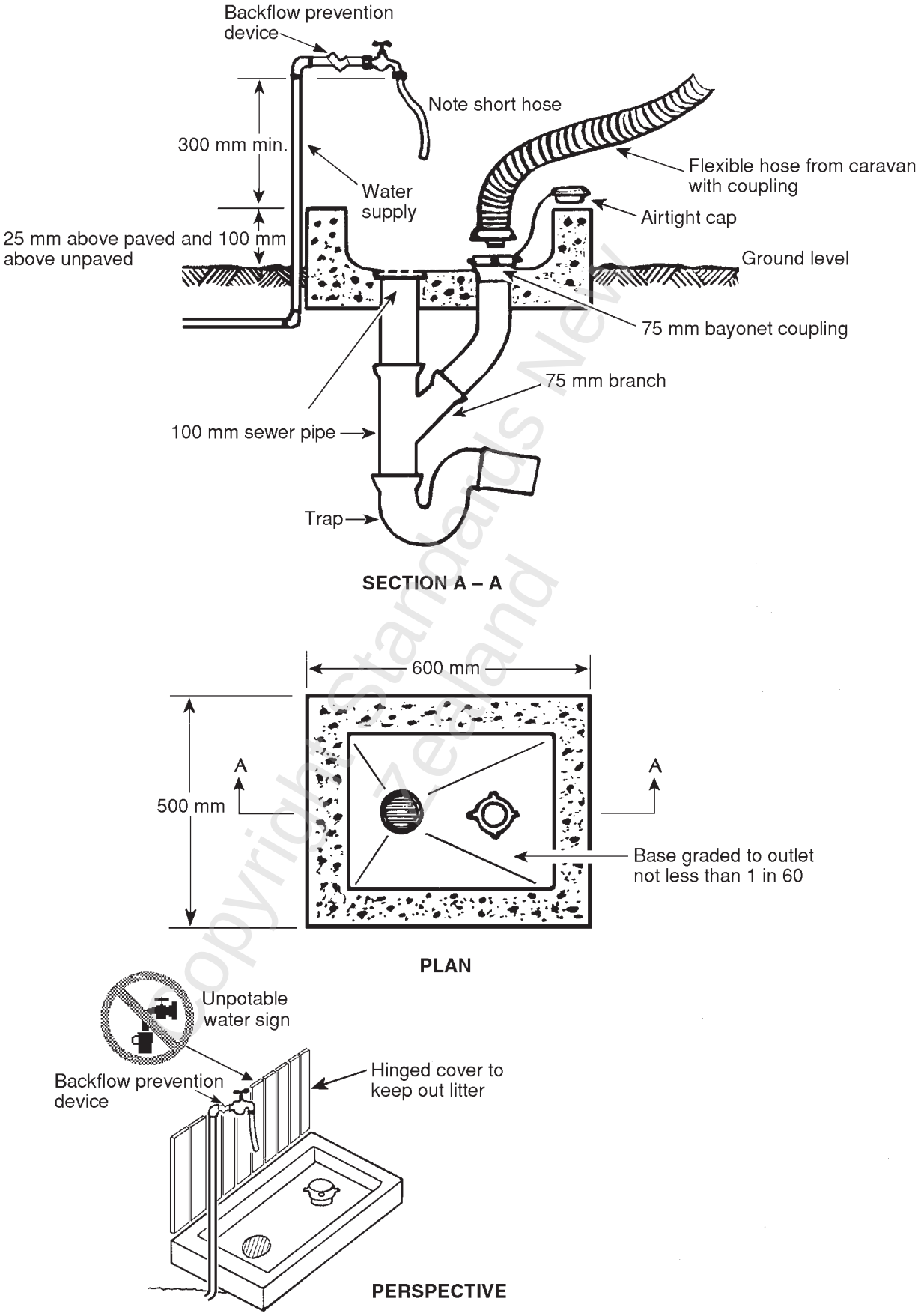


Figure B2 - Typical dump station installation

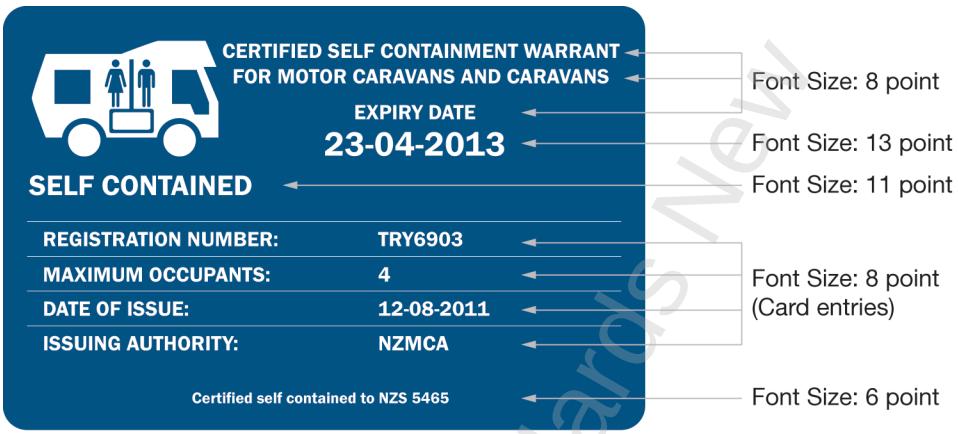
© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

Copyright Standards New Zealand

APPENDIX C
WARRANT DESIGN (Normative)

On the completion of obtaining a self containment certificate a self containment warrant shall be issued.

Such warrants shall be affixed to the inside left of the front window, or the inside left of the windshield, with the warrant details facing outwards. The warrant shall be designed in accordance with figure C1.



Warrant design shall be:
Class – Information
Enclosure shape – Rectangle
Symbol and wording – White
Background – Blue (match to Pantone® 301)
Enclosure/diagonal – Nil
Single colour print – Rectangle 100% fill; symbol blue (paper)
Font – Franklin Gothic Demi
Size – 85 mm x 55 mm

Amd 1
Mar '12

Figure C1 – Warrant design

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

Copyright Standards New Zealand

COPYRIGHT © Standards New Zealand

APPENDIX D
STICKER DESIGN (Normative)

On meeting the requirements for a self containment certificate a self containment sticker shall be issued.

Testing officers should be able to place the sticker once certifying a vehicle as meeting the self containment requirements of this Standard.

The sticker may be affixed to the bottom right-hand corner of the rear window, or right-hand side of the rear bumper of the vehicle, so that it is clearly visible at all times. The sticker shall be designed in accordance with figure D1.



Sticker design shall be:
Class – Information
Enclosure shape – Square
Symbol and wording – White (white reflective)
Background – Blue (blue reflective, match to Pantone® 301)
Enclosure/diagonal – Nil
Single colour print – Square 100% fill; symbol white (paper)
Size – 120 mm x 100 mm

Figure D1 – Sticker design

Amd 1
Mar '12

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

Copyright Standards New Zealand

NOTES

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

Copyright Standards New Zealand

Copyright Standards New Zealand

© 2017 THE CROWN ADMINISTERED BY THE NEW ZEALAND STANDARDS EXECUTIVE

Approved by the New Zealand Standards Council on 31 August 2001 to be a New Zealand Standard pursuant to section 10 of the Standards Act 1988. Amendment No.1 approved by the Standards Council on 21 February 2012. Amendment No.2 approved by the New Zealand Standards Approval Board on 9 May 2017 pursuant to section 12 of the Standards and Accreditation Act 2015.

First published: 10 October 2001

Reprinted incorporating Amendment No. 1: 9 March 2012

Reprinted incorporating Amendment No.2: 31 May 2017

The following references relate to this standard:

Project No. P 5465

Draft for comment No. DZ 5465

Typeset by: Standards New Zealand

© The Crown in right of New Zealand, administered by the New Zealand Standards Executive. Access to this standard has been sponsored by the Ministry of Business, Innovation and Employment under copyright licence LN001350. With the exceptions of Appendices A, C and D for which separate permissions apply, you are not permitted to reproduce any part of it without prior permission from Standards New Zealand unless your actions are covered by Part 3 of the Copyright Act 1994.

STANDARDS NEW ZEALAND
PAEREWA AOTEAROA