

Compliance Schedule Handbook

Prepared by the Department of Building and Housing

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

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



Department of
Building and Housing
Te Tari Kaupapa Whare

Department of Building and Housing
PO Box 11-846, Wellington.
Telephone 0800 242 243
Fax 04 471 0798,
Email: building@dbh.govt.nz



Sales enquiries should be directed to:
Customer Services,
Victoria University Book Centre
PO Box 12-337, Wellington, New Zealand
Telephone 0800 370 370, (04) 463 5511
Fax (04) 463 5510
Email: dbh@vicbooks.co.nz
www.vicbooks.co.nz
ISBN 0-477-01606-5

New Zealand Government

© Department of Building and Housing 2007

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

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

Compliance Schedule Handbook: Document History

	Date	Alterations
First published	25 May 2007	
Amendment 1	31 March 2008	p.2 Document History, Status p.3 Contents p.10 7.0 Specified Systems pp. 55–56 SS 16 Cable Cars

Document Status

The most recent version of this document, as detailed in the Document History, is approved by the Chief Executive of the Department of Building and Housing. It is effective from 31 March 2008 and supersedes all previous versions of this document.

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

Contents

	Page		Page
Compliance Schedules		– SS 7 – Automatic back-flow preventers	28
1 Introduction	5	– SS 8 – Lifts, escalators, travelators, or other systems for moving people or goods within buildings	29
2 Compliance schedule regime	6	– SS 9 – Mechanical ventilation or air conditioning systems	38
1.0 Compliance schedules	6	– SS 10 – Building maintenance units	41
2.0 Compliance schedule statement	8	– SS 11 – Laboratory fume cupboards	42
3.0 Building warrant of fitness	8	– SS 12 – Audio loops or other assistive listening systems	43
4.0 Form 12A – Certificate of compliance	9	– SS 13 – Smoke control systems	45
5.0 Compliance schedule reports	9	– SS 14 – Emergency power systems for, or signs relating to, a system or feature specified in any of clauses 1 to 13	48
6.0 Performance standard	9	– SS 15 – Other fire safety systems or features	49
7.0 Specified systems	9	– SS 14/2 & SS 15/4 – Signs	53
8.0 Transitional arrangements for independent qualified persons (IQPs)	10	– SS 16 – Cable Cars	55
3 Compliance schedule content guidelines	11		
• Part 1: Developing a compliance schedule	12		
1.0 Introduction	12		
2.0 Determining and categorising a specified system (SS)	12		
3.0 System description	14		
4.0 Inspection and maintenance	14		
5.0 Reporting and recording	15		
6.0 Responsibility	16		
7.0 Compliance schedule example form	17		
• Part 2: Content guide	19		
1.0 Use of this part	19		
– SS 1 – Automatic systems for fire suppression	20		
– SS 2 – Automatic or manual emergency warning systems	21		
– SS 3 – Electromagnetic or automatic doors or windows	22		
– SS 4 – Emergency lighting systems	25		
– SS 5 – Escape route pressurisation systems	26		
– SS 6 – Riser mains for use by fire services	27		

Amend 1
Mar 2008

Section 1 Introduction

Background

In March 2005, the parts of the Building Act 2004 (the Building Act) covering compliance schedules and building warrants of fitness (BWoFs) came into force and the Building Act 1991 (the former Act) was repealed. The Building Act and the introduction of the Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005 have brought about significant changes to the compliance schedule and BWoF regimes, including changes to the systems required on a building's compliance schedule. These regimes ensure that systems or features that contribute to the proper functioning of a building, such as lifts and sprinkler systems, are regularly monitored and maintained.

Use of this document

The Compliance Schedule Handbook is broken into three sections. The first is the introduction. The second, *Compliance schedule regime*, is intended to provide information about the compliance schedule and BWoF regimes under the Building Act. The third section, *Compliance schedule content guidelines*, provides a guide to developing a compliance schedule for a specified system or systems in a building, including guidance on the associated inspection, maintenance and reporting procedures.

Guidance

The Compliance Schedule Handbook is intended as a guide in accordance with section 175 of the Building Act. Readers should always refer to the Building Act and Building Regulations as the source documents. In all cases, a compliance schedule must be issued by a building consent authority. However, a building owner must, if required by the building consent authority, submit proposals for the inspection and routine maintenance procedures for the purposes of the compliance schedule as part of a building consent application. A building owner may submit these proposals with the building consent application even if the building consent authority has not required them.

Independent qualified persons

With the exception of Section 2 Paragraph 8.0, reference in the Compliance Schedule Handbook has been made to independent qualified persons (IQP), not licensed building practitioners (LBP), to align with the transitional arrangements provided by the Building Act – see Section 2.

Regional authorities

Under the Building Act, a regional authority performs the functions of a building consent authority and territorial authority that relate to compliance schedules and BWoFs, to the extent that those functions relate to dams. For the purpose of performing functions relating to dams, every reference (with the exception of Section 2 Paragraph 8.0) to a building consent authority or territorial authority in the Compliance Schedule Handbook should be read as a reference to a regional authority.

What this document does not cover

The Compliance Schedule Handbook does not provide model compliance schedules or examples of what a compliance schedule should look like. Its use is limited to providing guidance on how to develop a compliance schedule. It does not include advice about cable cars, which are not required by legislation to be covered by a compliance schedule until 31 March 2008.

Section 2 Compliance schedule regime

1.0 Compliance schedules

A compliance schedule is a document that contains specific information about, and procedures for, specified systems within a building.

Section 103 of the Building Act requires that a compliance schedule must state:

- the specified systems that are covered by the compliance schedule
- the performance standards for the specified systems
- the inspection, maintenance, and reporting procedures to be followed for each specified system
- the specified systems that relate to the following:
 - means of escape from fire
 - safety barriers
 - access and facilities for use by persons with disabilities
 - handheld hose reels for fire-fighting
 - any signs that are required by the Building Code or section 120 of the Building Act.

Section 100 of the Building Act states that a compliance schedule is required for a building (except a single household unit) containing any of the prescribed specified systems (currently there are 15 different specified systems prescribed – see Paragraph 7.0).

From 31 March 2008 any building, including a building used wholly as a single household unit, will require a compliance schedule if the building has a cable car attached to it, or servicing it.

Household units will only require the compliance schedule for the cable car, not any other specified system.

1.1 Owner's obligations

Section 101 of the Building Act provides that the owner of a building for which a compliance schedule is required under section 100 must obtain one. Failure to do so is an offence

carrying a fine of up to \$20,000, and a further \$2,000 for every day the offence is continued.

The owner is responsible for being aware of any specified system installed in their building and ensuring it is listed on a compliance schedule.

Owners of a building for which a compliance schedule has been issued also have a responsibility to ensure:

- each of the specified systems are performing and will continue to perform to the performance standards for that system
- they provide the territorial authority with an annual BWoF on the anniversary of the issue of the compliance schedule, accompanied by Form 12A(s) from an IQP for each specified system and any recommendations to amend the compliance schedule by an IQP
- the compliance schedule is kept at the place stated on the schedule and agreed to by the owner and the territorial authority
- the compliance schedule is available for inspection by any person or organisation with the right to inspect the building under any Act
- for the first 12 months after the compliance schedule is issued, a compliance schedule statement is displayed in a public place within the building
- they obtain annual written reports (see Paragraph 5.0) relating to the inspection, maintenance, and reporting procedures of the compliance schedule signed by the IQP
- they keep the annual written reports together with the compliance schedule for a period of 2 years and produce these reports when required by the territorial authority or person/organisation that has the right to inspect the building.

1.2 Issue of a compliance schedule

Compliance schedules for new buildings (ie, those with no existing schedule) are issued by a building consent authority when the code compliance certificate (CCC) is issued.

A building consent authority that issues a compliance schedule must provide a copy to the territorial authority in whose district the building is situated within five working days.

Where a certificate of acceptance is issued and a compliance schedule or amended compliance schedule is required as a result of the building work it covers, the new or amended compliance schedule is required to be attached to the certificate of acceptance.

Where a certificate for public use is issued, there is no requirement that the compliance schedule be issued with it.

If a certificate for public use is issued, the building's specified systems will still require inspection and maintenance procedures to be carried out prior to the issue of the code compliance certificate. One solution is for the territorial authority to issue a draft compliance schedule as a condition on the certificate for public use under section 363A(3)(b). Later, when the code compliance certificate is issued, the building consent authority can issue the official compliance schedule in accordance with section 102(1).

1.3 Amendment of a compliance schedule

Existing compliance schedules can be amended by both a building consent authority and a territorial authority, depending on the circumstances for which the amendment is required.

1.3.1 Amendments by building consent authorities

A building consent authority may amend a compliance schedule where necessary as a result of building work. This includes situations where new building work is occurring that:

- will affect an existing specified system that will require altered inspection and maintenance requirements
- will result in new specified systems being installed
- will remove an existing specified system.

1.3.2 Amendments by territorial authorities

A territorial authority may amend a compliance schedule where:

- the owner requests a change to the compliance schedule
- the owner's IQP recommends that the compliance schedule is amended, to ensure the specified systems will perform to the performance standards for those systems
- the territorial authority decides that the compliance schedule needs to be amended, to ensure the specified systems will perform to the performance standards for those systems.

The Building Act specifies procedures to be followed in each case.

No amendment can occur without consultation with the owner, although it may occur without the owner's agreement.

1.3.3 Effect of amendments

Amending a compliance schedule will not affect the timing of the issue of the Form 12A and subsequent BWoF.

Section 108(3)(a) provides that the BWoF is supplied on the anniversary of the issue of the original compliance schedule.

Where a compliance schedule is amended to incorporate or alter a specified system part way through the BWoF period, a Form 12A and BWoF can still be issued, and will be required to be issued on the original compliance schedule anniversary.

The Form 12A for the new or altered specified system will cover compliance with the inspection, maintenance, and reporting procedures for the period it has been installed. This is allowable because Forms 12A and 12 are signed based on compliance with the compliance schedule procedures **during** the previous 12 months. It does not indicate that a specified system has to be installed for 12 months or more before Forms 12A and 12 can be signed.

In these situations it may be useful to note on the compliance schedule report (see Paragraph 5.0) that the specified system has been installed for less than 12 months.

1.4 Existing buildings

All existing buildings that contain a system or feature listed in the former Act for inclusion on a compliance schedule should already have been issued with a compliance schedule under that Act. These compliance schedules remain in effect as if they were issued under the Building Act 2004. However, these compliance schedules should be amended to align with the specified systems in the Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005.

The following points need to be taken into consideration by: a building consent authority when issuing or amending a compliance schedule; a territorial authority when amending a compliance schedule; and by an IQP inspecting the specified systems.

- Existing buildings (including their specified systems) are not required to be upgraded to comply with the Building Code unless an alteration, change of use, or certain types of subdivision take place in the building. Refer to sections 112A, 115 and 116A of the Building Act.
- The inspection and maintenance procedures for a specified system are specific and appropriate to the system at the time it was installed. There is no requirement for these to be updated on the compliance schedule as more recent Standards are developed. However, existing compliance schedules should be amended for the purposes of ensuring specified systems continue to meet the performance standards (see Paragraph 1.3 on the previous page).

1.5 Compliance schedule form

The Building Act does not require a compliance schedule to be on a prescribed form. As a result, there is no authority in legislation that allows this form to be created in Regulations. The Department recognises that it is important to achieve national consistency in the format, layout and content of compliance schedules, and has provided an example of a compliance schedule form at the end of Part 1 of the compliance schedule content guidelines.

2.0 Compliance schedule statement

A compliance schedule statement states the specified systems contained in the building and notes where the compliance schedule is kept. It is not a statement about the performance of the specified systems listed.

A compliance schedule statement is issued on Form 10 of the Building (Forms) Regulations 2004 by the territorial authority.

It is required to be publicly displayed for 12 months after the compliance schedule is issued.

3.0 Building warrant of fitness (BWof)

A BWof is required where a compliance schedule has been issued for a building. A BWof verifies that the inspection, maintenance and reporting procedures for all the specified systems within a building have been carried out in accordance with the compliance schedule for the previous 12 months.

The BWof must be prepared in accordance with the prescribed form (Form 12) in the Building (Forms) Regulations 2004.

Section 108 of the Building Act requires that a BWof must:

- be supplied on each anniversary of the issue of the compliance schedule
- state the location of the compliance schedule and associated compliance schedule reports
- state that the inspection, maintenance, and reporting procedures have been fully complied with during the previous 12 months
- have attached to it all Form 12A certificates issued by IQPs for the specified systems
- have attached to it any recommendations from an IQP to amend the compliance schedule.

The owner must display a copy of the BWof in a place in the building where it can be seen by building users.

If a BWof is not displayed when required, or a false or misleading BWof is displayed, or a BWof is displayed in a manner not in

accordance with section 108 of the Building Act, the owner is liable for a fine of up to \$20,000.

4.0 Form 12A – Certificate of compliance

Form 12A is a form issued by an IQP to verify that the inspection, maintenance and reporting procedures on a compliance schedule for a specified system have been carried out during the previous 12 months.

In order for the BWoF to be valid, the owner must obtain Form 12A(s) covering all the specified systems in the building and attach them to the BWoF, before supplying it to the territorial authority.

There may be a Form 12A for each specified system or one Form 12A may cover several specified systems. This will depend on the number of IQPs required for a building. Whatever the case, when those certificates are considered together, they must certify that the inspection and maintenance procedures stated in the compliance schedule for all specified systems have been fully complied with during the previous 12 months.

The Form 12A cannot be amended or altered to create exceptions from the requirement to fully comply with the inspection, maintenance, and reporting procedures for the previous 12 months.

5.0 Compliance schedule reports

Section 110 of the Building Act requires that an owner of a building for which a compliance schedule has been issued must obtain annual written reports relating to the inspection, maintenance, and reporting procedures of the compliance schedule.

The owner must ensure the reports are:

- signed by an IQP who carried out one or more of the inspection, maintenance, and reporting procedures
- kept for a period of 2 years
- produced when required by the territorial authority and any other person or organisation who has the right to inspect the building under any Act.

The owner must also ensure the BWoF states where the reports, along with the compliance schedule, are kept.

6.0 Performance standard

The term 'Performance standard' for a specified system is not defined by the Building Act. However, it can be interpreted as 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.

The Building Act requires that a specified system must be inspected and maintained in order to ensure that it performs, and continues to perform, to that standard.

If a specified system is designed and installed to a Compliance Document, Standard or specific documentation, this will set the performance standard for that specified system. An example is the level required by NZS 4541: 1996 for sprinkler systems.

7.0 Specified systems

Specified systems are systems or features that contribute to the proper functioning of the 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 are listed below. Where one or more of these systems exist in a building (except a single household unit), a compliance schedule is required.

- SS 1 Automatic systems for fire suppression
- SS 2 Automatic or manual emergency warning systems for fire or other dangers
- SS 3 Electromagnetic or automatic doors or windows
- SS 4 Emergency lighting systems
- SS 5 Escape route pressurisation systems
- SS 6 Riser mains for use by fire services

- SS 7** Automatic back-flow preventers connected to a potable water supply
- SS 8** Lifts, escalators, travelators, or other systems for moving people or goods within buildings
- SS 9** Mechanical ventilation or air conditioning systems
- SS 10** Building maintenance units providing access to exterior and interior walls of buildings
- SS 11** Laboratory fume cupboards
- SS 12** Audio loops or other assistive listening systems
- SS 13** Smoke control systems
- SS 14** Emergency power systems for, or signs relating to, a system or feature specified in any of SS 1 to SS 13 above
- SS 15** Other fire safety systems or features (systems for communicating information intended to facilitate evacuation, final exits, fire separations, signs, fire separations)
- SS 16** Cable cars

Amend 1
Mar 2008

8.0 Transitional arrangements for independent qualified persons (IQPs)

The Building Act introduces the licensed building practitioner (LBP) regime to improve control of, and encourage better practices in, design and construction. This new regime includes the requirement for inspection, maintenance and reporting procedures for a specified system on a compliance schedule to be verified by a LBP through the requirement to issue a Form 12A.

Under the former Act, the equivalent role was the responsibility of an independent qualified person (IQP).

The Building Act only refers to LBPs, not IQPs, when discussing the compliance schedule and BWoF provisions.

The Building Act deals with the gap between regimes (IQP – LBP) by providing the following transitional provisions before 30 November 2009.

- A reference in the compliance schedule and BWoF sections to LBP(s), in relation to a territorial authority, includes a reference to an IQP accepted by the territorial authority as being qualified to carry out the inspection, maintenance, and reporting procedures required for a specified system stated in a compliance schedule.
- A person who immediately before 30 November 2004 was accepted by a territorial authority as being qualified to carry out the inspection, maintenance, and reporting procedures required for a specified system stated in a compliance schedule, continues to be accepted until the territorial authority withdraws its acceptance.
- A territorial authority may accept any person as being qualified to carry out the inspection, maintenance and reporting procedures required for a specified system stated in a compliance schedule.
- A territorial authority may withdraw its acceptance of any person as being qualified to carry out the inspection, maintenance and reporting procedures required for a specified system stated in a compliance schedule.

If not earlier withdrawn, a territorial authority's acceptance of a person as being qualified to carry out the inspection, maintenance, and reporting procedures required for a specified system expires on 30 November 2009.

Section 3 Compliance schedule content guidelines

Use of this section

This section is divided into two parts, which should be read together by the building consent authority when developing a compliance schedule, and by the owner when proposing inspection and routine maintenance procedures for the purposes of the compliance schedule.

The first part, *Developing a compliance schedule*, provides a guide to developing a compliance schedule for a specified system or systems in a building. It provides suggested compliance schedule sections and structure in a step-by-step format.

The second part, *Content guide*, provides information on individual specified systems and guidance relating to various inspection and maintenance procedures that could be used depending on the type of installation.

Note: Part 2 of the *Compliance schedule content guidelines* section does not contain model compliance schedules or examples of what a compliance schedule should look like. It provides information to assist in determining when to include a system or feature as a specified system and gives guidance relating to possible inspection and maintenance procedures.

PART 1: DEVELOPING A COMPLIANCE SCHEDULE

1.0 Introduction

It is important that a compliance schedule is a relevant, useful and compliant document. A building’s compliance schedule must also be specific and tailored to the building and its specified systems. This is for two main reasons.

- A building’s environment can introduce specific requirements for a specified system. In turn, this means there can be a range of possible specific inspection and maintenance requirements. Requirements for the same specified system in two different buildings may be completely different.
- Some specified systems incorporate a broad range of sub-systems and features. Each of these systems and features has its own individual inspection and maintenance requirements to ensure it performs to the performance standards. Issuing a compliance schedule with generic inspection and maintenance procedures for a given specified system, for example a ‘smoke control system’, when there are varying types, would be meaningless.

Before beginning to develop a compliance schedule, it is important to determine whether each system or feature proposed to be on the building’s compliance schedule is a specified system, and therefore whether it is required to be on the compliance schedule. Paragraphs 2.0–2.2.2 and Part 2 of the *Compliance schedule content guidelines* provide the tools to determine if a system or feature is a specified system.

Once it is established that a compliance schedule is required and the specified systems in the building are determined, a compliance schedule will need to be developed. The following five subjects should be considered when developing a compliance schedule or proposing inspection and routine maintenance procedures for the purposes of a compliance schedule.

- System description
- Inspection
- Maintenance
- Reporting and recording
- Responsibility

Including information about these items will ensure the compliance schedule can be understood and used by the owner, the IQPs and the territorial authority.

Paragraphs 3.0–6.0 provide guidance on how to construct a compliance schedule and develop information about each of the items listed above for a specified system in a building.

2.0 Determining and categorising a specified system (SS)

Although the specified systems are listed in the Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations, there may be situations where it is not clear whether a given system or feature is a specified system.

2.1 Guideline provisions

Part 2 of the *Compliance schedule content guidelines* section provides a ‘Scope’ in relation to specified systems SS 1 to SS 15, to assist in determining whether a system or feature should be listed on a compliance schedule.

Example: SS 11 Laboratory fume cupboards

A.	Scope
	<p>A laboratory fume cupboard is required to be listed on a compliance schedule where the cupboard:</p> <p>A.1 uses a ducted extraction system through the building.</p> <p>Examples:</p> <p>Examples of laboratory fume cupboards include, but are not limited to:</p> <p>(i) a ducted fume cupboard for laboratory use.</p>

2.2 Further clarification

In some cases a given system or feature of a building may have aspects or characteristics of several specified systems. While the 'Scope' provided in Part 2 of the *Compliance schedule content guidelines* aims to assist in making that judgement, it will not always be clear. Paragraph 2.2 (2.2.1 and 2.2.2) aims to assist in making the judgements around appropriately assigning a system or feature, which has aspects or characteristics of several specified systems, to a specified system.

It is important that the owner or owner's agent discuss any uncertainties around inclusion of a system with the building consent authority.

2.2.1 Mechanical ventilation

There are four specified systems that are generally referred to as mechanical ventilation systems. Appropriate categorisation of these is necessary for the compliance schedule. The mechanical ventilation specified systems are described below to assist with the appropriate categorisation of the system or feature in question.

- ***Specified system 5 – Escape route pressurisation systems***

An escape route pressurisation system is a mechanical ventilation system dedicated to the control of smoke or fire through pressurisation of an escape route.

- ***Specified system 9 – Mechanical ventilation or air conditioning systems***

Mechanical ventilation or air conditioning systems have the primary purpose of ventilating or air conditioning a building in normal circumstances, or have been installed to control dust and hazardous substances. A mechanical ventilation or air conditioning system may incorporate specialised functions that interface with the emergency warning system in the event of fire. The role of the system in fire mode must be recognised in the compliance schedule and its performance verified.

- ***Specified system 11 – Laboratory fume cupboards***

Laboratory fume cupboards have the primary purpose of capturing and removing, through mechanical ventilation, fumes associated with laboratory-based activities. They may incorporate other features such as electrical zoning of hazardous areas, liquid compounding, fume encapsulation and safety screens.

- ***Specified system 13 – Smoke control systems***

Smoke control systems are systems dedicated to controlling smoke within a building. They are not a dedicated escape route pressurisation system, nor the building's normal mechanical ventilation system. They may include a mechanical ventilation system (eg, dedicated fire mode extract fans and relief air dampers) in addition to passive smoke control features (eg, bulkheads, smoke curtains, pressure relief and venting openings).

2.2.2 Signs

Two specified systems incorporate signs which are required to be included on a compliance schedule. These are:

- ***Specified system 14 – emergency power systems for, or signs relating to, a system or feature specified in any of clauses 1 to 13***

This specified system includes signs associated with, or installed for the purposes of, a primary system contained in any of the specified systems 1–13. An example is lift load limit signs.

- ***Specified system 15/4 – Signs for communicating information intended to facilitate evacuation***

This specified system includes signs that have been installed to provide assistance to occupants to evacuate a building in the event of an emergency. Examples are exit and escape route direction signs.

Some signs may be covered by the two specified systems, for example, a sign indicating how to use a manual call point. It is suggested that where this occurs, a practical approach is to categorise the sign based on the primary reason for which it was installed. In the case of manual call points, SS 14 would be the most appropriate as the sign has been installed as part of an SS 2 (emergency warning systems) item. An exit sign leading to an automatic door would be listed under SS 15 as the sign is there for escape purposes, not to provide instructions to the user on how to operate the automatic door.

Signs are listed under two separate specified systems in the Regulations. This arrangement in the Regulations does not mean that there is a requirement that the specified systems be listed in any particular way on a compliance schedule. For instance, each primary specified system (SS 1–13) could be listed on a compliance schedule and where appropriate have SS 14 signs as a subcategory describing the signs that relate to them and their inspection, maintenance and reporting procedures. The same could be done for emergency power systems.

3.0 System description

It is essential that a compliance schedule is specifically tailored to a building and its specified system(s). This is important to ensure the ongoing performance of the specified systems to the required performance standards and to allow those carrying out and auditing the compliance schedule requirements to understand what is required.

As a minimum, a basic description of the system, its purpose, location and extent of installation should be provided on the compliance schedule to assist those carrying out the inspection and maintenance procedures.

It can be helpful to include the relevant building consent documentation or drawings and specifications on the compliance schedule. This information will assist users to understand the system design, installation and operation.

Example:

SS 7

7.1: 15 mm double check valve assembly – boiler feed supply – located in the level 9 plantroom – see building consent BC5394, drawing 4 page 5 (attached)

7.2: 20 mm double check valve assembly – swimming pool make up water supply – located on level 2 – see building consent BC5394, drawing 2 page 5 (attached)

Assigning a reference number to each specified system will help to distinguish between different specified systems of the same type. These reference numbers can then be used on plans to help identify a specified system's location.

3.1 Guideline provisions

Although Part 2 of the *Compliance schedule content guidelines* provides a general scope and some examples for each specified system, it does not provide a system description, as these are specific to each system and its arrangement within a building.

4.0 Inspection and maintenance

The Building Act requires that each specified system have inspection and maintenance procedures to ensure the system is performing, and continues to perform, to the performance standards set out for that specified system.

The inspection, maintenance, and reporting procedures need to be relevant to the performance standard, and therefore the way the system was designed, to ensure the specified system continues to perform in the way it was intended.

Often a New Zealand or international Standard will be suitable for the inspection and maintenance procedures for a particular specified system. In other cases it may be an inspection and maintenance document provided by the manufacturer/designer of the system, or it may be an inspection document prepared by a person qualified to do so (this may be developed using a combination of

manufacturers' specifications and other inspection Standards).

The inspection and maintenance procedures, including frequency, need to be appropriate to the particular specified system and its purpose within a building. This may include considering the age of the system, the system's historical performance, or a change in the use of the building.

Example – inspection statement for mechanical ventilation system – fire and smoke control:

Inspection content and frequency for the mechanical ventilation system shall be in accordance with sections 1 and 18 of AS 1851: 2005 – Maintenance of fire protection systems and equipment. In particular, inspections shall be carried out in accordance with tables 18.4.1.1 to 18.4.1.6 and 18.4.2.2 to 18.4.2.5.

4.1 Types of maintenance

There are two types of maintenance which need to be considered in the development of the compliance schedule, planned preventative maintenance and responsive maintenance.

Planned preventative maintenance

Planned preventative maintenance is aimed at avoiding breakdown or malfunction, through regular service, cleansing, adjustment, lubrication, or periodic replacement.

Planned preventative maintenance will generally be based on published Standards or recommendations made by the designer, manufacturer or supplier.

Example:

Maintenance shall be carried out in accordance with the attached 'Operating and Maintenance Manual for HVAC Services at 123 Common Street' dated 15/07/2004 by XYZ Engineers.

Responsive maintenance

Responsive maintenance is required where the system or a component of the system has failed, resulting in the performance standard not being satisfied. This may be identified during inspection, testing, planned preventative maintenance or reported by building users.

4.2 Guideline provisions

Part 2 of the *Compliance schedule content guidelines* provides both an inspection section and a maintenance section for each specified system. These provide guidance relating to possible inspection and maintenance procedures in various forms, including:

- reference to a Standard or document
- description of the inspection and maintenance procedures.

Where no appropriate procedures have been identified and where the listed procedures are not appropriate to a particular specified system, a specifically-designed inspection and maintenance document must be prepared by a person who is qualified, experienced and competent to do so. This may be the designer's recommendations or manufacturer's specifications.

Other suitable reference documents may be found within the Compliance Documents relevant to the specified systems.

In any case, the inspection and maintenance procedures must be appropriate for the specified system. Ultimately it will be up to the building consent authority to decide what procedures are appropriate when issuing the compliance schedule. However, a building owner needs to submit proposals for the inspection and routine maintenance procedures for the purposes of the compliance schedule as part of a building consent application.

While the referenced documents in Part 2 do not nominate the relevant clauses or sections, or have attached dates or versions, it is essential that these be included on a building's compliance schedule.

5.0 Reporting and recording

Including a reporting and recording section on the compliance schedule provides for the keeping of records and the availability of these records to the IQP, in order to issue a Form 12A certificate and for reference at any other time.

While in many cases all the inspection and maintenance procedures for a specified system are carried out by a single contracted IQP, it is possible that another IQP may be involved in carrying out the procedures. Their contribution may need to be known to the originally contracted IQP in order to verify that the inspection and maintenance procedures have been carried out during the previous 12 months.

Depending on the installation, it may be appropriate to keep records in a log book at the installation, with a summary report held in the designated location with the compliance schedule.

The Building Act states that it is the owner's responsibility to keep records relating to the compliance schedule. However, for practical reasons, it may be appropriate for the IQP to keep the records on the owner's behalf.

Example of a reporting/recording statement:

The owner must keep records of all inspection, maintenance and repairs undertaken in the previous 24 months.

The records must, as a minimum, include:

- details of any inspection, test or preventative maintenance carried out, including dates, work undertaken, faults found, remedies applied, and the person who performed the work*
- details of any other faults found or maintenance and repair work undertaken to maintain the system in working order, including dates, work undertaken, faults found, remedies applied and the person who performed the work.*

6.0 Responsibility

It is the owner's responsibility to satisfy the obligations under section 105 of the Building Act. These obligations include the requirement to ensure that inspection, maintenance, and reporting procedures are carried out.

Assistance may be sought from property management and facility management companies for coordination of the work.

IQPs will have to be involved in the technical aspects of the necessary work to verify that performance standards have been satisfied, and all inspection, maintenance and reporting procedures have been carried out to enable Form 12A to be issued.

Example of responsibility section for SS 1 – Automatic systems for fire suppression

All inspections shall be undertaken by independent qualified persons.

7.0 Compliance schedule example form

Compliance Schedule		
Date of issue:		
Last amended: <i>[delete if not applicable]</i>		
1. The building		
Street address of building:		
Legal description of land where building is located:		
Building name:		
Location of building within site/block number:		
Level/unit number:		
Current, lawfully established, use:		
Building consent number/s: <i>[delete if not applicable]</i>		
Highest fire hazard category for building use: <i>[insert number]</i>		
2. The owner		
Name of owner:		
Contact person: <i>[delete if the owner is an individual]</i>		
Mailing address:		
Street address/registered office:		
Phone number: Landline:		Mobile:
Daytime:		After hours:
Facsimile number:		
Email address:		
Website:		
First point of contact for communications with the territorial authority: <i>[Give full name, mailing address, phone number/s, facsimile number and e-mail address, which must be located in New Zealand. This person must have authority to permit a person to enter the building for the purpose of inspecting the specified systems.]</i>		
3. Specified system/s		
The following specified system/s is/are contained in the building.		
Reference number	Specified system	System description
<i>[Assign a specific number for each specified system in the building (ie, SS 1.1, SS 3/3.1), not a direct reference to the numbers in Regulations]</i>	<i>[List every specified system in the building as described in Regulations]</i>	<i>[Include a basic description of each specified system, its purpose, location and extent of installation. Include references to plans and specifications where relevant]</i>
The following is/are the performance standard/s for the specified system/s in the building.		
Reference number	Performance standard	
<i>[List specific reference number assigned above]</i>	<i>[The performance standard may be a reference to a Compliance Document, Standard, or specific documentation depending on what each specified system was designed and installed to]</i>	

Compliance Schedule (continued)

The following is/are the inspection, maintenance, and reporting procedures for the specified system/s in the building.

Reference number	Procedures			Responsibility
	Inspection	Maintenance	Reporting	
<i>[List specific reference number assigned above]</i>	<i>[Inspection procedures may be identified by a written description, or a reference to a Standard or other document]</i>	<i>[Maintenance procedures may be identified by a written description, or a reference to a Standard or other document]</i>	<i>[Reporting procedures may be identified by a written description, or a reference to a Standard or other document]</i>	<i>[List persons responsible for the adjacent procedures]</i>

The following specified systems relate to: *[delete those not applicable]*

means of escape from fire
[list relevant systems]

safety barriers
[list relevant systems]

means of access, and facilities for use, by persons with disabilities
[list relevant systems]

handheld hose reels for fire-fighting
[list relevant systems]

signs
[list relevant systems]

Signature: _____

Position: _____

On behalf of: *[name of territorial authority or building consent authority]*

Date: *[insert date]*

(If the compliance schedule is issued by a building consent authority, a copy of it must be sent to the territorial authority in whose district the building is located within 5 working days.)

PART 2: CONTENT GUIDE

1.0 Use of this part

This part contains guidance for each of the specified systems. The information is not detailed in nature or specific to any particular system, but instead provides general guidance relating to three areas, namely 'Scope', 'Inspections' and 'Maintenance'. No information is given in respect of 'Reporting and recording' or 'Responsibility'.

The 'Scope' section provides one means of determining whether a given system or feature is a specified system and gives some examples. The 'Scope' is not exhaustive and considerations should not be limited to this when deciding if a particular system needs to be included on a compliance schedule.

The 'Inspections' and 'Maintenance' sections give guidance by referring to Standards that may be applicable and by noting parts of a specified system that may need to be checked. In each particular case, when a compliance schedule is issued, the relevant parts of the Standard that are applicable to the installed specified system need to be nominated in the compliance schedule. Likewise, where lists are given suggesting parts of the specified system to be inspected, the compliance schedule needs to complete the list applicable to the actual installed system and nominate the actual inspections required along with what constitutes a pass.

Note: This part does not contain model compliance schedules or examples of what a compliance schedule should look like. The information provided is not a substitute for the requirements set out in the Building Act and Regulations. Ultimately, a building consent authority must be satisfied that any compliance schedule it issues complies with the requirements in the Building Act and Regulations.

SS 1 Automatic systems for fire suppression

A.	Scope	C.	Maintenance
	<p>An automatic fire suppression system is required to be listed on a compliance schedule in all cases.</p> <p>Examples:</p> <p>Examples of automatic fire suppression systems include, but are not limited to:</p> <ul style="list-style-type: none"> (i) a water sprinkler system to satisfy the Acceptable Solution C/AS1 or as part of an engineered solution for compliance with the Building Code (ii) a gas flood fire suppression system installed within a building for computer equipment protection. 		<p>Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure the system will operate as required in the event of a fire.</p>
B.	Inspections		
	<p>General</p> <p>Automatic systems for fire suppression require regular inspection and testing to ensure the system will operate as required by the performance standard in the event of a fire.</p> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, one or more of the following referenced Standards or documents could be used:</p> <ul style="list-style-type: none"> B.1 NZS 4541 B.2 NZS 4515 B.3 AS 1851 B.4 a specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so. <p>Annual inspections</p> <p>Where the system is connected to the building's emergency warning system, testing of the interface between the two systems should be carried out annually.</p>		

SS 2 Automatic or manual emergency warning systems

A.	Scope
<p>An emergency warning system is required to be listed on a compliance schedule in all cases.</p> <p>Examples:</p> <p>Examples of emergency warning systems include, but are not limited to the following.</p> <p>Emergency warning systems that perform a function contributing to the fire safety precautions of a building, for example:</p> <ul style="list-style-type: none"> (i) manual warning systems (Type 2 alarm) (ii) automatic fire alarm system with heat detectors and manual call points (Type 3 alarm) (iii) automatic fire alarm system with smoke detectors and manual call points (Type 4 alarm). <p>Emergency warning systems installed to manage hazardous properties of, or danger from, substances stored or used within the premises that are governed by a Building Code clause. For example:</p> <ul style="list-style-type: none"> (i) a carbon monoxide gas detection system within a carpark building that warns occupants of a potentially hazardous concentration of gas. 	

C.	Maintenance
<p>Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure the system will operate as required in the event of a fire or other danger.</p>	

B.	Inspections
<p>General</p> <p>Emergency warning systems require regular inspection and testing to ensure the system will operate as required by the performance standard in the event of fire or other danger.</p> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, one or more of the following referenced Standards or documents could be used:</p> <ul style="list-style-type: none"> B.1 NZS 4512 B.2 AS 1851 B.3 a specifically designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so. 	

SS 3 Electromagnetic or automatic doors or windows

- SS 3/1 Automatic doors
- SS 3/2 Access controlled doors
- SS 3/3 Interfaced fire or smoke doors or windows

SS 3/1 Automatic doors

A.	Scope
	<p>An automatic door is required to be listed on a compliance schedule where the door:</p> <p>A.1 is designed to open without direct operation from any building occupant, and</p> <p>A.2 could cause injury should they fail to operate as required, and</p> <p>A.3 could trap occupants in a building should it fail to operate as required.</p> <p>Examples:</p> <p>Examples of automatic doors include, but are not limited to:</p> <ul style="list-style-type: none"> (i) automatic sliding doors (ii) automatic revolving doors.

B.	Inspections
	<p>General</p> <p>Automatic doors require regular inspection and testing to ensure the system will operate as required by the performance standard, occupants are not prevented from leaving the building in the event of an emergency, and people with disabilities are able to gain access to the internal space of the building.</p> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, one or more of the following referenced Standards or documents could be used:</p> <p>B.1 NZS 4239</p> <p>B.2 AS 4085</p> <p>B.3 AS 4290</p> <p>B.4 a specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so.</p>

Inspections (continued)
<p>As a minimum, if not already stated by the nominated Standard(s) or document, inspections should be carried out:</p> <ul style="list-style-type: none"> • daily, when the building is in use, for crowd occupancies (CS, CL, CO, CM) and for all buildings where building work is occurring that may affect an automatic door on an escape route or an accessible route • monthly, for all other occupancies • annually, for all occupancies. <p>Daily and monthly inspections</p> <p>Doors should be inspected to ensure they can be opened and that they are not:</p> <p>B.5 locked</p> <p>B.6 barred</p> <p>B.7 blocked.</p> <p>Annual inspections</p> <p>Inspection of the following should be carried out when appropriate to the installation.</p> <p>B.8 Auto door controller operation</p> <p>B.9 Activation devices</p> <p>B.10 Safety devices</p> <p>B.11 Hanger brackets and bolt fixings</p> <p>B.12 Wheels</p> <p>B.13 Anti-rise rollers</p> <p>B.14 General condition of door leaves and hardware</p> <p>B.15 Alignment and clearance of doors</p> <p>B.16 Glazing and vision panel to door leaves and over lights</p> <p>B.17 Floor guides</p> <p>B.18 Operation of any doorway illumination</p> <p>B.19 Visibility of strongly contrasting visual strip to leading edge</p> <p>In addition to being inspected, the following should be tested for effective operation when appropriate to the installation.</p> <p>B.20 Electrical and mechanical lock</p> <p>B.21 Battery back-up</p> <p>B.22 Brake settings</p> <p>B.23 Panic breakout or fail-safe devices</p> <p>B.24 Interface between the automatic doors and the building's emergency warning system</p> <p>B.25 Motion pick up of sensors at shallow angles</p> <p>B.26 Door timing (it should remain open for at least five seconds)</p>

C.	Maintenance
<p>Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document. It is also carried out to ensure:</p> <ul style="list-style-type: none"> • safe, suitable operation • occupants are not prevented from leaving the building in the event of an emergency • people with disabilities can gain access to the internal space of the building. <p>In particular, the following should be carried out during the inspections as required.</p> <p>C.1 Adjust belt or chain tension</p> <p>C.2 Adjust brake settings</p> <p>C.3 Replace sticky, noisy or non-round wheels</p> <p>C.4 Clean track and wheels with moist cloth</p> <p>C.5 Recharge back-up batteries when power is below specified levels</p> <p>Depending on size and type, back-up rechargeable batteries should be replaced approximately every two years or when found to be inoperable.</p>	

SS 3/2 Access-controlled doors

A.	Scope
<p>An access-controlled door is required to be listed on a compliance schedule where the door:</p> <p>A.1 has a security control measure installed on or as part of it, and</p> <p>A.2 could trap occupants in a building, should it fail to operate as required.</p> <p>Examples:</p> <p>Examples of access-controlled doors include, but are not limited to:</p> <ul style="list-style-type: none"> (i) swipe card access (ii) proximity sensor access (iii) key pad access (iv) delayed egress. <p>COMMENT: Doors which fall under the scope of SS 3/1 as well as this scope should be inspected and tested for the appropriate items under SS 3/1 and SS 3/2.</p>	

B.	Inspections
<p>General</p> <p>Access-controlled doors require regular inspections to ensure occupants are not prevented from leaving the building and are able to leave the building without the use of swipe cards, keys or other security devices in the event of an emergency.</p> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard the following referenced document could be used.</p> <p>B.1 A specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so.</p> <p>As a minimum, inspections should be carried out:</p> <ul style="list-style-type: none"> • daily, when the building is in use, for crowd occupancies (CS, CL, CO, CM) and for all buildings where building work is occurring that may affect an access control door on an escape route • monthly, for all other occupancies • six-monthly, for all occupancies. <p>Daily and monthly inspections</p> <p>Doors should be inspected to ensure they are not:</p> <p>B.2 locked</p> <p>B.3 barred</p> <p>B.4 blocked.</p> <p>Six-monthly inspections</p> <p>The following checks should be carried out when appropriate to the installation.</p> <p>B.5 Operation of fail-safe devices in emergency and power outage situations</p> <p>B.6 Connection to alarm system</p> <p>B.7 Any emergency power supply required to operate in the event of a power failure (this may be checked as a requirement under SS 14/1)</p>	

C.	Maintenance
<p>Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection document, and to ensure occupants are not prevented from leaving the building in the event of an emergency.</p> <p>Depending on size and type, back-up rechargeable batteries should be replaced approximately every two years or when found to be inoperable.</p>	

SS 3/3 Interfaced fire or smoke doors or windows

A.	Scope
<p>An interfaced fire or smoke door or window is required to be listed on a compliance schedule where the door or window:</p> <p>A.1 is designed to open or close on the activation of the building emergency warning system or detection device.</p> <hr/> <p>Examples:</p> <p>An example of interfaced fire or smoke doors includes, but is not limited to:</p> <p>(i) electromagnetic door holders.</p> <hr/> <p>COMMENT:</p> <p>Fire and smoke doors or windows that form part of a fire or smoke separation may also need to be inspected in accordance with SS 15/3 and SS 15/5.</p>	

B.	Inspections
<p>General</p> <p>Interfaced fire and smoke doors or windows require regular inspections to ensure they operate as required by the performance standards in event of a fire.</p> <hr/> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard the following referenced Standard or document could be used.</p> <p>B.1 AS 4178</p> <p>B.2 A specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so</p> <p>As a minimum, if not already stated by the nominated Standard(s) or document, inspections should be carried out:</p> <ul style="list-style-type: none"> • daily, when the building is in use, for crowd occupancies (CS, CL, CO, CM) and for all buildings where building work is occurring that may affect an interfaced door on an escape route • monthly, for all other occupancies • annually, for all occupancies. 	

Inspections (continued)	
<p>Daily and monthly inspections</p> <p>Doors should be inspected to ensure they are not:</p> <p>B.3 locked</p> <p>B.4 barred</p> <p>B.5 blocked.</p> <hr/> <p>Annual inspections</p> <p>The following checks should be carried out when appropriate to the installation.</p> <p>B.6 Operation of fail-safe devices in power outage situations</p> <p>B.7 Operation of manual release provisions</p> <p>B.8 Connection to the building’s emergency warning system</p>	

C.	Maintenance
<p>Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure the fire or smoke door or window operates correctly in the event of a fire.</p>	

SS 4 Emergency lighting systems

A.	Scope	C.	Maintenance
<p>An emergency lighting system is required to be listed on a compliance schedule in all cases.</p> <p>Examples:</p> <p>Examples of emergency lighting systems include, but are not limited to:</p> <ul style="list-style-type: none"> (i) an emergency lighting system within the safe or open path of the building to facilitate evacuation (ii) an emergency lighting installation for identification of the exitways of a building to facilitate evacuation. 		<p>Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure effective operation of the emergency lighting for the required duration in the event of a failure of the general lighting system.</p>	
B.	Inspections		
<p>General</p> <p>Emergency lighting systems require regular inspection and testing to ensure effective operation for the required duration in the event of a failure of the general lighting system.</p> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, one or more of the following referenced Standards or documents could be used.</p> <p>For existing systems installed in accordance with NZS 6742:</p> <ul style="list-style-type: none"> • B.1 NZS 6742. <p>For systems installed in accordance with AS/NZS 2293:</p> <ul style="list-style-type: none"> • B.2 AS/NZS 2293. <p>Where a generator is part of the emergency lighting system:</p> <ul style="list-style-type: none"> • B.3 the generator should be inspected in accordance with NZS 6104. <p>Where none of the above procedures are appropriate:</p> <ul style="list-style-type: none"> • B.4 a specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so. <p>Annual inspection</p> <p>Where the system is connected to the building's emergency warning system, testing of the interface between the two systems should be carried out annually.</p>			

SS 5 Escape route pressurisation systems

A.	Scope
<p>An escape route pressurisation system is required to be listed on a compliance schedule in all cases.</p> <p>Examples:</p> <p>Examples of escape route pressurisation systems include, but are not limited to:</p> <ul style="list-style-type: none"> (i) a corridor pressurisation system (ii) a stairwell pressurisation system. 	
B.	Inspections
<p>General</p> <p>Escape route pressurisation systems require regular inspection and testing to ensure the system will operate as required by the performance standard in the event of a fire.</p> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, the following referenced Standard or document could be used.</p> <p>B.1 AS 1851</p> <p>B.2 A specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so</p>	
C.	Maintenance
<p>Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure the system will operate as required in the event of a fire.</p>	

SS 6 Riser mains

A. Scope

A riser main for use by fire services is required to be listed on a compliance schedule in all cases.

Examples:

Examples of riser mains for use by fire services include, but are not limited to:

- (i) a dry riser
- (ii) a charged riser.

B. Inspections

General

Riser mains for use by fire services require regular inspection and testing to ensure the system will operate as required by the performance standard in the event of a fire.

Content and frequency of inspections

Depending on the type of installation and its performance standard, the following referenced Standard or document could be used.

B.1 NZS 4510

B.2 A specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so

C. Maintenance

Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure the system will operate as required in the event of a fire.

SS 7 Automatic back-flow preventers

A. Scope

A back-flow preventer is required to be listed on a compliance schedule where the preventer:

- A.1** is connected to a potable water supply, and
- A.2** is contained entirely within the property boundary of the building it is servicing, or
- A.3** it is contained partially within the property boundary of the building it is servicing and is not owned by the network utility operator (NUO).

Examples:

Examples of back-flow preventers include, but are not limited to:

- i) reduced pressure zone devices
- ii) double check valve assemblies
- iii) pressure type vacuum breakers
- iv) atmospheric vacuum breakers.

B. Inspections

General

Automatic back-flow preventers require regular testing to ensure they provide protection to the drinking water supply.

Content and frequency of inspections

Depending on the type of installation and its performance standard, the following referenced Standard, document or procedure could be used.

B.1 Reduced pressure zone devices, double check valve assemblies, pressure vacuum breakers:

- B.1.1** AS 2845.3
- B.1.2** United States Environmental Protection Agency 'Cross-Connection Control Manual'.

B.2 Atmospheric vacuum breaker devices.

B.2.1 These should be tested annually in accordance with the following and achieve the required results.

- (i) Operate the device by turning on the fixture or equipment and observe the operation. The poppet or float must close on increase in pressure, and
- (ii) Operate the device by turning off the fixture or equipment and observe the operation. The poppet or float must open on decrease in pressure.

Inspections (continued)

B.3 Any other back-flow preventer connected to a potable water supply required to meet the requirements of the Building Code:

- B.3.1** a specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so.

Non-testable automatic back-flow preventers connected to a potable water supply should be inspected annually and replaced or repaired if leaking or displaying any other fault.

Automatic back-flow preventers should be inspected and tested after repair or replacement.

C. Maintenance

Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure the back-flow preventer provides protection to the drinking water supply.

SS 8 Lifts, escalators, travelators, or other systems for moving people or goods within buildings

- SS 8/1 Passenger-carrying lifts
- SS 8/2 Service lifts
- SS 8/3 Escalators and moving walks

SS 8/1 Passenger-carrying lifts

A.	Scope
<p>A passenger-carrying lift is required to be listed on a compliance schedule in all cases.</p> <p>Examples:</p> <p>Examples of passenger-carrying lifts include, but are not limited to:</p> <ul style="list-style-type: none"> (i) a high speed elevator in a commercial office building (ii) a platform lift providing access for a person with disabilities. 	

B.	Inspections
<p>General</p> <p>Passenger-carrying lifts require regular inspection and testing to ensure they operate as required by the performance standard.</p> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, one or more of the following referenced Standards or documents could be used.</p> <p>For lifts installed in buildings before the introduction of the Building Act 1991:</p> <ul style="list-style-type: none"> • B.1 Power Lift Rules applicable at the time of installation. <p>For installations that comply with D2/AS1 and are installed to NZS 4332:</p> <ul style="list-style-type: none"> • B.2 inspections and checks should be carried out annually in accordance with the requirements of the checklist on pages 30, 31 and 32. <p>For installations that comply with D2/AS1 and are installed to EN 81 (Part 1 or 2):</p> <ul style="list-style-type: none"> • B.3 inspections and tests should be carried out annually in accordance with EN 81 Clause D.2 'Tests and verifications' of Annex D plus the checks required by the checklist on pages 30, 31 and 32. <p>Where the above inspection procedures are not appropriate to the installation:</p> <ul style="list-style-type: none"> • B.4 a specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so. 	

Inspections (continued)

Annual inspection

Where the system is connected to the building's emergency warning system, testing of the interface between the two systems should be carried out annually.

C. Maintenance

Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure safe and suitable use.

Checklists

List of inspections and checks required for passenger carrying lifts complying with D2/AS1			
	For lift designed to D2/AS1 based on reference document:		Initials and comments
	NZS 4332¹	EN 81^{2,3}	
	Inspections and checks required	Checks required	
Machine room			
Visual inspection of machine beams and supports	6.1, 6.3, 7.18	✓	
Check security of machine room door	7.4.1	6.3.3, 6.3.4	
Check there are no obstructions or rubbish in the machine room	7.2, 7.7	✓	
Check that lighting in machine room functions	7.14	6.3.6	
Check ventilation in machine room functions	7.17	1.6 (7.17)	
Check for the presence of circuit diagrams and manual	24.10	1.6 (24.10)	
Check condition of any emergency hand winding equipment	8.16	12.5	
Machinery			
Check condition of traction sheave, with special attention to the grooves	18.1, 18.2	✓	
Check condition of divertor sheave and other sheaves	18.1, 18.2	✓	
Check the operation of the brake	8.11	12.4	
Check the condition of the brake and the brake linings	8.11	12.4	
Check the running of machines, gearboxes, motors, generators, their bearings and any communicators	✓ 30	✓ 9.9	
Check operation of governor			
Lift well			
Visual check of liftwell enclosure	12.1, 12.3, 12.4	5.2	
Check hoisting ropes for equal tension, attachments and terminations are correct and in good condition, number of broken wires within acceptable limits	16.17	9.2.3.1, 9.5.1	
Check for presence and legibility of rope data plates	16.6	–	
Check that rope retainers are present and correctly fastened	18.2	9.5.4	
Visual check of guide rails for straightness and security	20	✓	
Lift pit			
Check there are no obstructions or rubbish in the pit	11.3	1.6 (11.3)	
Check that lighting in the lift pit and lift well functions	11.6	5.9	
Check dryness of pit	11.3, 11.9	1.6 (11.3, 11.9)	
Visual check of buffer condition	10	✓	
Check function of lift pit safety switch	11.7	5.7.3.4 (a)	
Lift car exterior			
Check functioning of car external lighting	22.20.1	13.6	
Check condition of guides or rollers	19.4, 20.15, 20.16	10.2	
Check function of car top controls	25.3	8.15	

List of inspections and checks required for passenger carrying lifts complying with D2/AS1 (continued)			
	For lift designed to D2/AS1 based on reference document:		Initials and comments
	NZS 4332¹	EN 81^{2,3}	
	Inspections and checks required	Checks required	
Lift car			
Inspect and test safety gear (car and counterweight)	29, 30, 69	9.8	
Visual check of the car construction and linings	22	8.3	
Check door operation, including door protective devices	23	1.6 (23.6), 8.7	
Check lift rating plate present	21.3	15.2.1	
Check lift controls for correct operation	25	14.2	
Check correct operation of alarms and emergency telephone	28.2	1.6 (28.2.1), 14.2.3, 15.12	
Check access to all, if any, emergency trapdoor	22.15	8.12	
Landing doors			
Check door locks	14.1, 14.4	7.7	
Check emergency opening facilities on landing doors	14.5	7.7.3.2, 15.11	
Check door operation, including door protective devices	23.6	1.6 (23.6), 7.5	
Hydraulic systems			
Visual check of the hydraulic system, including hoses, ram and cylinder	34, 35, 37	✓	
Check caisson for moisture	34.3.7	✓	
Check condition of flow restriction valve	36.5	12.5.5	
Check operation of the manual lowering means	36.6	12.9	
Check operation of device to hold car at lowest floor	31.6	5.7.3	
Check operation of anti-creep device	60.4	9.5.1	
Operation			
Check operation of door locks, limit switches, slack rope switch, stop switches, trapdoor switch and other safety switches	7.12, 11.7, 22.15(f), 24.1, 26.1, 26.7, 27, 60	14.1, 14.2	
Check functioning of lift car emergency lighting	22.20.2.7, 22.21	1.6 (22.20.2.7)	
Check for correct operation under fire conditions	25.6, 25.7	1.6 (25.6, 25.7)	
Check correct operation of counterweight displacement detector	25.8	1.6 (25.8)	
Check operation of load weighting device	26.6		
Lifts on access routes for people with disabilities			
Check floor leveling	70.1	1.6 (70.1)	
Check door dwell time	70.3	1.6 (70.3)	
Check controls distinction	70.4	1.6 (70.4)	
Check correct operation of landing indicators	70.5	1.6 (70.5)	
Check handrails	70.6	1.6 (70.6)	

List of inspections and checks required for passenger carrying lifts complying with D2/AS1 (continued)			
	For lift designed to D2/AS1 based on reference document:		Initials and comments
	NZS 4332 ¹	EN 81 ^{2,3}	
	Inspections and checks required	Checks required	
General			
Visual check for any repairs or modifications carried out incorrectly	✓	✓	
Check maintenance records are properly kept	✓	✓	
Note:			
1 For lifts designed to NZS 4332 all of the items above must be checked. References given are to clauses of NZS 4332.			
2 For lifts designed to EN 81 (Part 1 or 2) checks shall be carried out where the item is ticked (✓) or a reference is given. References given are to clauses EN 81, as modified by D2/AS1. References given in brackets are the relevant clauses imported from NZS 4332.			
3 These checks are to be made in addition to the tests and verifications of Clause D.2 of Annex D of EN 81.			

SS 8/2 Service lifts

A.	Scope
<p>A service lift is required to be listed on a compliance schedule in all cases.</p> <p>Examples:</p> <p>Examples of service lifts include, but are not limited to:</p> <ul style="list-style-type: none"> (i) dumb waiter (ii) book hoist (iii) vehicle stacking systems (iv) stage lifts. 	

B.	Inspections
<p>General</p> <p>Service lifts require regular inspection and testing to ensure they operate as required by the performance standard and to ensure loading and unloading provisions are safe.</p> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, one or more of the following referenced Standards or documents could be used.</p> <p>Where the lift installation complies with D2/AS2:</p> <ul style="list-style-type: none"> • B.1 inspections and checks should be carried out annually in accordance with the requirements of the checklist on pages 34 and 35. <p>Installations installed before the requirements of D2/AS1:</p> <ul style="list-style-type: none"> • B.2 should comply with the Rules for Power Lifts Not Exceeding 750 Watts (1.H.P.) applicable at the time of installation. <p>Where the above inspection procedures are not appropriate to the installation:</p> <ul style="list-style-type: none"> • B.3 a specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so. <p>Annual inspection</p> <p>Where the system is connected to the building's emergency warning system, testing of the interface between the two systems should be carried out annually.</p>	

C.	Maintenance
<p>Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure safe and suitable use.</p>	

Checklist

Checklist suitable for service lifts complying with D2/AS2

References are rules in The Rules For Power Lifts Not Exceeding 750 Watts (I.H.P)

* Indicates that the rule has been modified by D2/AS2

	Reference	Initials and comments
Machinery spaces		
Visual inspection of machine beams and supports	3.1(a)	
Check security of machine room door	3.2(f)*	
Clean the machinery space and clear out any rubbish	3.2(f)*	
Check lighting in the machinery space functions	3.2(d)	
Check the condition of the controller		
Check the governor and any position devices		
Check for the presence of circuit diagrams, manual and log book		
Machinery		
Check sheaves, pulleys and drums with special attention to the grooves	6.2	
Check the condition and operation of the brake and the condition of brake linings	3.1(b)	
Check the running of the lift machinery		
Check condition of drive belts	3.1(c)	
Lift well		
Inspect and test any safety gear	1.5	
Visual check of liftwell enclosure	5	
Check hoisting ropes for equal tension, attachments and terminations are correct and in good condition, number of broken wires within acceptable limits, filling not being shed, all ropes of similar condition, correct length of rope	6.1.1	
Visual check of guide rails for integrity, straightness and security	9.2*	
Check condition of guide shoes or rollers		
Lift pit		
Remove any rubbish from the lift pit		
Check lighting in the pit functions	4.4(g)	
Check dryness of pit	4.4(b)	
Visual check of buffer condition and other pit components	4.3*	
Landing stations		
Check door locks	8.3(a) and (b), 8.4	
Check lift controls for correct operation		
Lift car		
Check car doors or safety barriers		
Check lift car lighting		
Hydraulic systems		
Visual check of the hydraulic system, including hoses, ram and cylinder	12*	
Check caisson for moisture		
Check operation of anti-creep device	12.7	
Check the operation of control and auxiliary valves	12.8, 12.9	

Checklist suitable for service lifts complying with D2/AS2 (continued)

References are rules in The Rules For Power Lifts Not Exceeding 750 Watts (I.H.P)

* Indicates that the rule has been modified by D2/AS2

	Reference	Initials and comments
Operation		
Check operation of terminal stopping devices, slack rope switch and any emergency switch	10	
Check landing door interlocks and opening of the door when the car is away from the landing	8.4(a)	
General		
Visually check for any repairs or modifications carried out		
Maintain full records of maintenance and inspections		

SS 8/3 Escalators and moving walks

A.	Scope
<p>An escalator or moving walk is required to be listed on a compliance schedule in all cases.</p> <p>Examples:</p> <p>Examples of escalators and moving walks include, but are not limited to:</p> <ul style="list-style-type: none"> (i) an escalator within a shopping mall for occupant use (ii) a moving horizontal walkway for occupant use. 	

B.	Inspections
<p>General</p> <p>Escalators and moving walks require regular inspection and testing to ensure they operate as required by the performance standard.</p> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, the following referenced Standard or document could be used.</p> <p>Where the installation complies with D2/AS3:</p> <ul style="list-style-type: none"> • B.1 inspections and checks should be carried out annually in accordance with the requirements of the checklist on page 37. <p>Where the above inspection procedures are not appropriate to the installation:</p> <ul style="list-style-type: none"> • B.2 a specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so. <p>Annual inspection</p> <p>Where the system is connected to the building's emergency warning system, testing of the interface between the two systems should be carried out annually.</p>	

C.	Maintenance
<p>Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure safe and suitable use.</p>	

Checklist**Checklist suitable for escalators and moving walks**

References are to Clauses in EN 115

* Indicates that the rule has been modified by D2/AS3

	Reference	Initials and comments
Safety devices as appropriate		
Switches to inspection doors	5.1.3	
Stop switch in machinery space	6.3.3*	
Overspeed protection	12.5	
Emergency stop devices	14.2.2.3.1	
Other stop switches	14.2.2.1 (a) to (h)	
Brakes	12.4, 16.2.1 (d)	
Driving elements for visible signs of wear and tear and for insufficient tension of belts and chains	9.0*	
Steps, pallets or the belt for defects, true run and guidance.	8.0*	
Dimensions and tolerances	0.1.2, 11.0	
Combs for proper condition and adjustment	8.3, 11.3	
Balustrade interior panelling and the skirting	5.1.5.4 to 5.1.5.6	
Handrails	7.0*	

SS 9 Mechanical ventilation or air conditioning systems

A.	Scope	Scope (continued)
	<p>A mechanical ventilation or air conditioning system is required to be listed on a compliance schedule where the system:</p> <p>A.1. Building Code requirements</p> <p>A.1.1 Is required to be installed for the purposes of the Building Code.</p> <p>A.2. Outdoor air</p> <p>A.2.1 Is used to deliver outdoor air to the occupants of one or more spaces that cannot be provided with adequate outdoor air from natural ventilation.</p> <p>A.3. Safety</p> <p>A.3.1 Or part of the system is used to collect potentially harmful material and either capture it (eg, by filtration or absorption) or discharge it to a safe place (this includes associated make-up air systems).</p> <p>COMMENT: For inspection and maintenance of laboratory fume cupboards refer to SS 11.</p> <p>A.3.2 Is required to maintain a difference in air pressure between two areas of a building, or between an area of a building and outside, for the purpose of minimising the spread of potentially harmful material.</p> <p>COMMENT: For inspection and maintenance of escape route pressurisation systems and pressurisation systems for smoke control see SS 5 and SS 13 respectively.</p> <p>A.3.3 Is capable of producing potentially harmful material and distributing it in a form that may be harmful to people.</p> <p>A.4. Fire and smoke control</p> <p>A.4.1 Or part of the system, passes through a fire separation and could spread fire or smoke to other firecells.</p> <p>A.4.2 Is required to control the spread of fire or smoke by shutting down or changing into a particular mode of operation on receipt of a signal – either from a heat or smoke detector incorporated into the system or from a fire detection and alarm system.</p> <p>A.4.3 Incorporates a combustion appliance or other source of heating that could cause a fire outside the normally-occupied space (this includes associated make-up air systems).</p> <p>COMMENT: Refer to SS 13, Smoke control systems, for the procedures for systems that have been installed solely for the purposes of controlling or discharging smoke.</p>	<p>Examples:</p> <p>Examples of mechanical ventilation or air conditioning systems to be incorporated in a compliance schedule include, but are not limited to:</p> <ul style="list-style-type: none"> (i) a toilet extract system serving multiple facilities (ii) a ducted ventilation or air conditioning system (iii) a spray booth ventilation system where the booth forms all or part of the building (iv) an air-handling system that maintains a differential air pressure in a hospital operating theatre, medical isolation room, quarantine facility or pharmaceutical manufacturing plant (v) a cooling-water system incorporating one or more cooling towers or evaporative condensers (vi) an air-handling system required to function in smoke management or smoke clearance mode during a fire (vii) a system incorporating one or more solid, liquid or gas-fired boilers (viii) a system containing one or more electric heating elements mounted in air handling units or ducts located outside the occupied space (ix) a split air conditioning unit that introduces fresh air into the building. <p>A mechanical ventilation or air conditioning system is not required to be listed on the compliance schedule if:</p> <ul style="list-style-type: none"> • it does not meet any of the criteria A.1.1 – A.4.3 to the left, and • failure of that system or unit is readily apparent and likely to result in occupant complaints before health or safety is threatened. <p>Examples:</p> <p>Examples of mechanical ventilation or air conditioning systems not to be incorporated in a compliance schedule include, but are not limited to:</p> <ul style="list-style-type: none"> (i) a split air conditioning unit that does not introduce fresh air into the building (eg, a high-wall split air conditioning unit, a cassette-type split air conditioning unit without a fresh air intake duct) (iii) an extract fan in a cooking area or toilet space, serving a facility of a scale normally found in a single domestic residence (iv) a dust extract system in a building that is not part of the building.

B.	Inspections
<p>General</p> <p>Mechanical ventilation and air conditioning systems require regular inspection to ensure they operate as required by the performance standard and to ensure preservation of any inbuilt safety features.</p>	
<p>B.1 System hygiene</p> <hr/> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, the following referenced Standard or document could be used.</p> <p>B.1.1 AS/NZS 3666.2</p> <p>B.1.2 A specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so.</p>	
<p>COMMENT:</p> <p>Particular attention must be given to systems incorporating cooling towers or evaporative condensers, in case organisms such as Legionella are present.</p>	
<p>B.2 Chemical control</p> <hr/> <p>Content and frequency of inspections</p> <p>To ensure adequate chemical control is being achieved in the water in cooling towers and evaporative condensers, the following tests should also be carried out.</p> <p>B.2.1 for cooling towers and evaporative condensers with automatic chemical dosing:</p> <ul style="list-style-type: none"> – bacteriological tests performed as detailed in Table 1, page 40. <p>B.2.2 for cooling towers and evaporative condensers without automatic chemical dosing:</p> <ul style="list-style-type: none"> – weekly dipslide tests – bacteriological tests performed as detailed in Table 1, page 40. <p>When dipslide tests have a result greater than 10⁵ cfu/ml, control strategies in AS/NZS 3666.3 Table 3.2 must be implemented.</p>	
<p>B.3 Fire and smoke control</p> <hr/> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, the following referenced Standard or document could be used for the content and frequency of inspection of the fire and smoke control features of mechanical ventilation and air conditioning systems:</p> <p>B.3.1 AS 1851</p> <p>B.3.2 a specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so.</p>	

Inspections (continued)	
<p>COMMENT:</p> <p>The Standards referred to in these compliance schedule guidelines focus on system hygiene, and on the control of fire and smoke respectively. If these requirements are met, then the ability of a system to meet other requirements for proper operation may also be met. However, any additional inspection or maintenance activities required to ensure that a system continues to operate properly should be included in the inspection and maintenance procedures.</p>	
C.	Maintenance
<p>Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure effective operation and preservation of any inbuilt safety features.</p>	

Table 1: Cooling tower testing			
Cooling tower with automatic chemical dosing	Time	Test method	Test result levels and control strategies²
Legionella:	Monthly	AS/NZS 3896 ¹	AS/NZS 3666.3 ² Table 3.1
Heterotrophic microorganisms	Monthly	AS 4276.3.1 ¹	AS/NZS 3666.3 Table 3.2
Cooling tower without automatic chemical dosing			
In addition to the testing above, cooling towers without automatic chemical dosing must also do the following test.			
Heterotrophic microorganisms	Weekly	Dipslide	AS/NZS 3666.3 Table 3.2
Note 1			
Tests to AS/NZS 3896 and AS 4276.3.1 shall be undertaken by an IANZ biologically accredited laboratory.			
Note 2			
Legionella tests with results greater than or equal to 1000 cfu/ml should be notified within 48 hours to the local Medical Officer of Health at the Public Health Service of the District Health Board, and the Required Control Strategy from Table 3.1 of AS/NZS 3666.3 shall be implemented.			
Note 3			
Industrial cooling towers are not required by the Building Act to be included on a compliance schedule. Testing for Legionella in these cooling towers is required by employers to ensure a safe working environment for their employees under the Health and Safety in Employment Act 1992.			

SS 10 Building maintenance units

A.	Scope
	<p>A building maintenance unit is required to be listed on a compliance schedule where the unit:</p> <p>A.1 provides access to exterior or interior walls of a building, and</p> <p>A.2 is installed as part of the building, and</p> <p>A.3 is mechanical, electrical, or hydraulic in nature.</p> <p>Examples:</p> <p>An example of a building maintenance unit includes, but is not limited to:</p> <p>(i) a gantry hung over the side of a building that is secured to the building by a track using a wheeled trolley for positioning.</p>
B.	Inspections
	<p>General</p> <p>Building maintenance units require regular inspection and testing to ensure they operate as required by the performance standard.</p> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, one or more of the following referenced Standards or documents could be used.</p> <p>For suspended access equipment:</p> <ul style="list-style-type: none"> • B.1 BS 6037.1. <p>For travelling ladders and gantries:</p> <ul style="list-style-type: none"> • B.2 BS 6037.2. <p>B.3 A specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so.</p>
C.	Maintenance
	<p>Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure safe and suitable operation.</p>

SS 11 Laboratory fume cupboards

A.	Scope
<p>A laboratory fume cupboard is required to be listed on a compliance schedule where the cupboard:</p> <p>A.1 uses a ducted extraction system through the building.</p> <hr/> <p>Examples:</p> <p>An example of a laboratory fume cupboard includes, but is not limited to:</p> <p>(i) a ducted fume cupboard for laboratory use.</p>	
B.	Inspections
<p>General</p> <p>Laboratory fume cupboards systems require regular inspection and testing to ensure they operate as required by the performance standard.</p> <hr/> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, one or more of the following referenced Standards or documents could be used.</p> <p>B.1 For ducted fume cupboard systems, the content of the inspections should be in accordance with AS/NZS 2243.8</p> <p>B.2 For local ventilation systems (fume hoods and plenums), the content of the inspections should be in accordance with AS/NZS 2243.1</p> <p>B.3 A specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so</p>	
C.	Maintenance
<p>Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure safe and suitable system operation.</p>	

SS 12 Audio loops or other assistive listening systems

- SS 12/1 Audio loops
- SS 12/2 FM radio frequency systems and infrared beam transmission systems

SS 12/1 Audio loops

A. Scope

An audio loop is required to be listed on a building’s compliance schedule in all cases.

B. Inspections

General

Audio loops require regular inspection to ensure they operate as required by the performance standard.

Content and frequency of inspections

Audio loops should be inspected six-monthly in accordance with the requirements below.

Six-monthly inspections

The six-monthly inspections should include, as a minimum, inspection and testing of:

B.1 magnetic field strength in the specified magnetic field area for the values defined in AS 1088.4

B.2 magnetic background noise interference from other equipment where, since the last inspection, equipment has been installed, activated or altered in the proximity of the teleloop system.

COMMENT:

Such equipment could include electrical fittings, heating systems, electrical controls or equipment, an adjacent loop system or metallic structures.

B.3 Sound amplification installations consisting of loop systems should be tested for sound pressure level and sound distortion.

Where room acoustics have been altered since the last inspection, the sound amplification installation should also be tested for spectrum analysis and speech intelligibility (RASTI).

COMMENT:

Room acoustics could have been altered or affected by such things as the addition or removal of carpet, curtains or objects.

C. Maintenance

Planned preventative maintenance and responsive maintenance should be applied to ensure continued effective operation during occupation of the building.

SS 12/2 FM radio frequency systems and infrared beam transmission systems

A. Scope

An FM radio frequency system or infrared (IR) beam transmission system is required to be listed on a building’s compliance schedule in all cases.

B. Inspections

General

FM radio frequency systems and IR beam transmission systems are required to be inspected regularly to ensure they operate as required by the performance standard.

Content and frequency of inspections

FM radio frequency and IR beam transmission systems should be inspected six-monthly in accordance with the requirements below.

Six-monthly inspections

The six-monthly inspections should include, as a minimum, inspection and testing of:

B.1 signal transmission strength

B.2 FM transmission and availability of good reception in the indicated public area – any coverage blank spots should be eliminated or marked.

COMMENT:

Where IR transmission is used, blank spots may be caused by pillars, obstructions or poor placement of the emitters, as reception is dependent on direct line transmission.

B.3 Receiver settings – these should be set for the transmission channel used at the venue.

B.4 Where only FM transmission is available and users provide their own receivers, the system should be tested for proper operation and full area coverage.

Inspections (continued)

B.5 Where receiver units and relevant listening devices are available for public hire they should be inspected to ensure:

B.5.1 the specified number of receivers are available for use.

The following items should also be tested to ensure they are functioning properly, being used correctly, and are in good condition:

B.5.2 cords

B.5.3 connectors

B.5.4 teleloop (where used)

B.5.5 stethoclip, earplugs

B.5.6 headset.

C. Maintenance

Planned preventative maintenance should be applied to ensure continued operation during occupation of the building.

In particular the following should be carried out.

C.1 Where equipment is available for hire, earplugs, headset covers or ear pads should be sanitised and sealed in a bag or replaced after each use

C.2 Rechargeable batteries used in the receivers should be recharged after each use to ensure full operating capacity

Responsive maintenance should be applied to ensure continued operation during occupation of the building.

In particular the following should be carried out.

C.3 Where a component of the assistive listening system is found to be faulty or not operating as required it should be repaired or replaced without undue delay

SS 13 Smoke control systems

- SS 13/1 Mechanical smoke control
- SS 13/2 Natural smoke control
- SS 13/3 Smoke curtains

SS 13/1 Mechanical smoke control

A.	Scope
	<p>A mechanical smoke control system is required to be listed on a compliance schedule where the system:</p> <p>A.1 has been installed solely for the purpose of controlling or discharging smoke in the event of a fire, and</p> <p>A.2 the smoke is removed or controlled using mechanical means.</p> <p>Examples:</p> <p>Examples of mechanical smoke control systems include, but are not limited to:</p> <ul style="list-style-type: none"> (i) dedicated smoke exhaust (ii) dedicated smoke control. <p>COMMENT: SS 13/1 does not apply to air handling systems required to function in smoke clearance mode during a fire. Such systems are covered under SS9.</p>

B.	Inspections
	<p>General</p> <p>Mechanical smoke ventilation systems require regular inspection and testing to ensure they operate as required by the performance standard.</p> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, the following referenced Standard or document could be used.</p> <p>B.1 AS 1851</p> <p>B.2 A specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so</p>

C.	Maintenance
	<p>Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure effective operation for the required duration in the event of a fire.</p>

SS 13/2 Natural smoke control

A.	Scope
	<p>A natural smoke control system is required to be listed on a compliance schedule where the system:</p> <p>A.1 has been installed solely to control or ventilate smoke in the event of a fire, and</p> <p>A.2 the smoke is removed or controlled using natural buoyancy methods.</p> <p>Examples:</p> <p>Examples of natural smoke control systems include, but are not limited to:</p> <ul style="list-style-type: none"> (i) a natural smoke ventilator which is designed to open automatically after the outbreak of fire (ii) a smoke reservoir specifically designed within a building to retain or collect a thermally buoyant smoke layer in the event of a fire. <p>COMMENT: Reservoirs can also be used with a mechanical system, see SS 13/1.</p>

B.	Inspections
	<p>General</p> <p>Natural smoke control systems require regular inspection and testing to ensure they operate as required by the performance standard.</p> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, the following referenced Standard or document could be used.</p> <p>B.1 AS 1851</p> <p>B.2 A specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so</p> <p>As a minimum, and if not already stated by the nominated Standard or document, inspections should be carried out six-monthly and annually.</p>

Inspections (continued)

Six-monthly inspections

The following minimum inspections and tests should be carried out at six-monthly intervals where appropriate to the installation.

B.3 Visual inspections

B.3.1 Inspect for damage to mechanical components including corrosion damage.

B.4 Operational inspections

B.4.1 Where a fire alarm signal is used, activate the fire alarm and check the correct automatic operation of the ventilator(s)

B.4.2 Where a heat-activated fusible link is used, disconnect the fusible link and check the correct automatic operation of the ventilator(s). Reconnect fusible link following successful operation and return ventilator(s) to normal position

Annual inspections

The following minimum inspections and tests should be carried out annually, where appropriate to the installation.

B.5 Carry out the six-monthly visual and operation inspection and testing.

B.6 Check energy source to:

- ventilator actuator eg, gas charge in gas-powered actuator
- electrical supply to motors or other electrical powered actuating devices
- power supply to any control panel
- power supply to any electro-mechanical 'hold closed' device.

B.7 Check fuses, isolators, relays and contactors.

B.8 Check condition of cables and terminals.

C. Maintenance

Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure effective operation for the required duration in the event of a fire.

In particular, the following should be carried out at the inspections as required.

C.1 Replace any fuses, isolators, relays or contactors found to be faulty (Ref B.7)

C.2 Tighten terminals where necessary (Ref B.8)

SS 13/3 Smoke curtains

A. Scope

A smoke curtain is required to be listed on a compliance schedule where the curtain:

A.1 has been installed to control smoke movement within a building.

B. Inspections

General

Smoke curtains require regular inspection and testing to ensure they operate as required by the performance standard.

Content and frequency of inspections

Depending on the type of installation and its performance standard, the following referenced Standard or document could be used:

B.1 AS 1851

B.2 A specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so

As a minimum, and if not already stated by the nominated Standard or document, the following inspections should be carried out six-monthly and annually.

Six-monthly inspections

The following minimum inspections and tests should be carried out at six-monthly intervals where appropriate to the installation.

B.3 Visual inspection

B.3.1 Check that the curtain has no obstructions within the area of travel and within the ceiling slot through which the curtain drops

B.3.2 Check that the curtain fabric is intact and has no signs of damage

B.4 Operation check

B.4.1 Activate the fire alarm signal and check the correct automatic operation of the curtain(s). The curtain(s) should descend to the correct level, and curtain edges should have clearances, which provide an effective smoke barrier

B.4.2 For automatic retracting curtains, reset the alarm signal and check that all curtains retract

B.4.3 For manual retraction systems, reset the alarm and manually retract the curtain

B.4.4 Inspect the curtain again to make sure the fabric has rolled up correctly and the bottom bar has not snagged on any obstacle during retraction

Inspections (continued)**Annual inspections**

The following minimum inspections and tests should be carried out annually where appropriate to the installation.

B.5 Carry out six-monthly inspections as detailed in B.3 and B.4 on the previous page

B.6 Check and record mains voltage to the system. This may be at the control panel for powered systems or at the electro-mechanical 'hold-open' device for non-powered systems

COMMENT:

Non-powered systems may utilise a low voltage DC supply to the 'hold-open' device.

B.7 Check fuses, isolators, relays and contactors

B.8 Check condition of cables and terminals

B.9 Check and record voltage supplied to the motors of powered curtains

B.10 Check security of fabric fixing to bottom bar

B.11 Check and record satisfactory operation of smoke curtain from the control panel (this typically applies to powered curtains only)

B.12 Check and record fail safe operation on removal of power to the system

B.13 Carry out a visual inspection of the casing, mechanical fixings, guide rails (where fitted)

COMMENT:

Leave installation in full automatic operating mode after inspecting and testing.

C. Maintenance

Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure effective operation for the required duration in the event of a fire.

In particular, the following should be carried out at the inspections as required.

C.1 Replace any fuses, isolators, relays or contactors found to be faulty (Ref B.7)

C.2 Tighten terminals where necessary (Ref B.8)

C.3 Repair fabric fixing to bottom bar where not secure (Ref B.10)

SS 14 Emergency power systems for, or signs relating to, a specified system in any of specified systems 1–13

- SS 14/1 Emergency power systems
- SS 14/2 Signs (see the end of this Part)

SS 14/1 Emergency power systems

A.	Scope
	<p>An emergency power system is required to be listed on a compliance schedule where the system:</p> <p>A.1 is installed for the purposes of supplying emergency power to any of the specified systems 1–13.</p> <p>Examples:</p> <p>Examples of emergency power systems include, but are not limited to:</p> <ul style="list-style-type: none"> (i) an engine alternator set for a sprinkler system pressure boost pump (SS 1) (ii) uninterruptible power supply for an emergency lighting system (SS 4) (iii) an engine alternator set for provisions of electrical supply to passenger lifts (SS 8) (iv) an engine alternator set for provision of electrical supply to a smoke clearance system (SS 13).

B.	Inspections
	<p>General</p> <p>Emergency power systems require regular inspection and testing to ensure they operate as required by the performance standard, in the event that the primary power supply fails.</p> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, one or more of the following referenced Standards or documents could be used.</p> <p>B.1 NZS 6104</p> <p>B.2 The inspection procedures for emergency power systems referenced in SS 1–13</p> <p>B.3 A specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so</p>

C.	Maintenance
	<p>Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, to ensure the system will operate as required in the event that the primary power supply fails.</p>

SS 15 Other fire safety systems or features

- SS 15/1 Systems for communicating spoken information intended to facilitate evacuation
- SS 15/2 Final exits
- SS 15/3 Fire separations
- SS 15/4 Signs for communicating information intended to facilitate evacuation (see the end of this Part)
- SS 15/5 Smoke separations

SS 15/1 Systems for communicating spoken information intended to facilitate evacuation

A.	Scope
	<p>A system for communicating spoken information intended to facilitate evacuation is required to be listed on a compliance schedule where the system:</p> <p>A.1 forms part of a means of escape from fire which contains one or more of the specified systems 1–6, 9 and 13.</p> <hr/> <p>Examples:</p> <p>Examples of systems for communicating spoken information intended to facilitate evacuation include, but are not limited to:</p> <ul style="list-style-type: none"> (i) a building intercom system for use by the Fire Service (ii) a public address system to facilitate staged evacuation (iii) an emergency warning intercommunications system (EWIS).

B.	Inspections
	<p>General</p> <p>Systems for communicating spoken information intended to facilitate evacuation require regular inspection and testing to ensure they operate as required by the performance standard in the event of a fire.</p> <hr/> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, one or more of the following referenced Standards or documents could be used.</p> <p>B.1 NZS 4512</p> <p>B.2 AS 1851</p> <p>B.3 A specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so</p>

C.	Maintenance
	<p>Planned preventative maintenance and responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard or document, and to ensure the system will operate as required in the event of a fire.</p>

SS 15/2 Final exits

A.	Scope
	<p>A final exit is required to be listed on a compliance schedule where:</p> <p>A.1 the escape route in which the final exit is located contains one or more of the specified systems 1–6, 9 and 13.</p> <hr/> <p>Examples:</p> <p>Examples of final exits include, but are not limited to:</p> <ul style="list-style-type: none"> (i) an exit door from the building to the street (ii) an exit gate at the base of an external stair (iii) an exit gate between an enclosed yard of a building and the street (iv) a door between two evacuation zones in a hospital with staged evacuation (v) a door between two buildings where either building is a safe place for the adjacent building.

B.	Inspections
	<p>General</p> <p>Final exits require regular inspection to ensure occupants are not prevented from leaving the building in the event of an emergency.</p> <hr/> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, one or more of the following documents could be used.</p> <p>B.1 Checklist from the published guidelines for the Fire Safety and Evacuation of Buildings Regulations 1992</p> <p>B.2 A specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so</p>

Inspections (continued)

As a minimum, if not already stated by the nominated Standard(s) or document, inspections should be carried out:

- daily, when the building is in use, for crowd occupancies (CS, CL, CO, CM) and for all buildings where building work is occurring that may affect a final exit
- monthly, for all other occupancies.

Daily and monthly inspections

Final exits should be inspected to ensure they can be opened and are not:

B.3 locked

B.4 barred

B.5 blocked.

And that door-locking devices:

B.6 are clearly visible

B.7 are easily operated without a key or other security device

B.8 do not prevent or override the direct operation of panic bolts fitted to any door.

C. Maintenance

Responsive maintenance should be carried out to ensure occupants are not prevented from leaving the building in the event of an emergency.

In particular, the final exits should be maintained to ensure they are:

C.1 clearly identified

C.2 free of obstructions

C.3 unlocked

C.4 easily-used.

SS 15/3 Fire separations

A. Scope

A fire separation is required to be listed on a compliance schedule where the fire separation:

A.1 forms part of the means of escape from fire which contains one or more of the specified systems 1–6, 9 and 13.

Examples:

Examples of fire separations include, but are not limited to, the following:

- (i) fire door forming part of a fire separation
- (ii) walls forming a safe path within a building
- (iii) fire rated floor in a service cupboard.

B. Inspections

General

Fire separations require regular inspection to ensure they prohibit the spread of fire and, in the case of fire doors, occupants are not prevented from leaving the building in the event of an emergency.

Content and frequency of inspections

Depending on the type of installation and its performance standard, one or more of the following Standards or documents could be used.

B.1 Compliance Document C/AS1 Fire Safety

B.2 AS/NZS 1905

B.3 A specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so

As a minimum, if not already stated by the nominated Standard(s) or document, inspections should be carried out:

- daily, when the building is in use, for crowd occupancies (CS, CL, CO, CM) and for all buildings where building work is occurring that may affect a fire separation
- six-monthly, for crowd occupancies
- monthly and annually, for all other occupancies.

Daily and monthly inspections

Fire separations that bound exitways should be visually inspected for:

B.4 signs of damage or deterioration that could adversely affect their fire resistance function, particularly with respect to closures, exposed fire-stopping and surface finish

B.5 new penetrations without suitable fire-stopping.

An inspection should be carried out to ensure doors forming part of an escape route can be opened and are not:

B.6 locked

B.7 barred

B.8 blocked.

Inspections (continued)

Six-monthly and annual inspections

The following minimum checks should be carried out when appropriate to the installation to ensure that:

- B.9** doors are not damaged or obstructed
- B.10** door leaves or fire shutters close and latch automatically from any position
- B.11** double acting doors and double leaf doors stop with the leaves in line with the frame, and seals (where fitted) are in contact at meeting stile and/or frame
- B.12** door leaves on self closers shut with an acceptable maximum closing force (See Code Clause D1.3.4(f))
- B.13** hardware is securely fixed
- B.14** no unauthorised hardware is attached
- B.15** fire doors in exitways can be opened without keys to allow ready egress from the building at all times
- B.16** fire door to frame clearances comply with NZS 4232, or where legally installed to a previous Standard, comply as reasonably practicable to NZS 4232
- B.17** manufacturer’s label is on the fire door leaf or shutter and frame where installed in accordance with NZS 4232 (and where the door installation has been subject to a building consent, the labels comply with C/AS1 Part 6)
- B.18** fusible link/rollers/cables can be activated
- B.19** doors or windows are not kept open by methods other than hold-open devices that comply with the Building Code and are in good working order
- B.20** doors haven’t been relocated without suitable fire separation in the ceiling space
- B.21** separations are not damaged or deteriorated in a way that could adversely affect their fire resistance function
- B.22** separations do not have new penetrations without suitable fire-stopping.

C. Maintenance

Responsive maintenance should be carried out to ensure fire separations prohibit the spread of fire and, in the case of fire doors, occupants are not prevented from leaving the building in the event of an emergency. In particular the remedy of any defect identified in B.4 to B.22.

SS 15/5 Smoke separations

A. Scope

A smoke separation is required on a compliance schedule where the smoke separation:

A.1 forms part of the means of escape from fire which contains one or more of the specified systems 1–6, 9 and 13.

Examples:

Examples of smoke separations include, but are not limited to:

- (i) walls forming a protected path in a building
- (ii) smoke resistant lift lobby
- (iii) a smoke stop door.

B. Inspections

General

Smoke separations require regular inspection to ensure they prohibit the passage of smoke and, in the case of smoke doors, occupants are not prevented from leaving the building in the event of an emergency.

Content and frequency of inspections

Depending on the type of installation and its performance standard, one or more of the following Standards or documents could be used.

B.1 Compliance Document C/AS1 Fire Safety

B.2 A specifically-designed solution prepared by a person who, on the basis of experience and qualifications, is competent to do so

As a minimum, if not already stated by the nominated Standard(s) or document, inspections should be carried out:

- daily, when the building is in use, for crowd occupancies (CS, CL, CO, CM) and for all buildings where building work is occurring that may affect a smoke separation
- six-monthly, for crowd occupancies
- monthly and annually, for all other occupancies.

Inspections (continued)**Daily and monthly inspections**

The smoke separation should be visually inspected for:

B.3 signs of damage or deterioration that could adversely affect their smoke control function, particularly with respect to closures, exposed smoke-stopping and surface finish

B.4 new penetrations without suitable smoke-stopping

An inspection should be carried out to ensure smoke doors forming part of an escape route can be opened and are not:

B.5 locked

B.6 barred

B.7 blocked.

Six-monthly and annual inspections

The following minimum checks should be carried out when appropriate to the installation to ensure:

B.8 doors are not damaged or obstructed

B.9 door leaves close and latch automatically from any position

B.10 double acting doors and double leaf doors stop with the leaves in line with the frame, and seals (where fitted) are in contact at meeting stile and/or frame

B.11 smoke control door seals (where fitted) are intact and provide continuous contact

B.12 door leaves on self closers shut with an acceptable maximum closing force (See Code Clause D1.3.4(f))

B.13 hardware is securely fixed

B.14 no unauthorised hardware is attached

B.15 doors in exitways can be opened without keys to allow ready egress from the building at all times

B.16 doors or windows are not kept open by methods other than hold-open devices that comply with the Building Code and are in good working order

B.17 doors haven't been relocated without suitable smoke-stopping in the ceiling space.

C.**Maintenance**

Responsive maintenance should be carried out to ensure smoke separations prohibit the spread of smoke and, in the case of smoke doors, occupants are not prevented from leaving the building in the event of an emergency. In particular the remedy of any defect identified in B.3 to B.17.

SS 14/2 & SS 15/4 Signs

A.	Scope	B.	Inspections
<p>SS 14/2</p> <p>A sign is required to be listed on a compliance schedule for the purposes of specified system 14 where the sign:</p> <p>A.1 relates to one or more of the specified systems 1–13.</p> <hr/> <p>SS 15/4</p> <p>A sign for communicating information intended to facilitate evacuation is required to be listed on a compliance schedule for the purposes of specified system 15 where the sign:</p> <p>A.1 forms part of a means of escape from fire which contains one or more of the specified systems 1–6, 9 and 13.</p> <p>Examples SS 14/2:</p> <p>Examples of signs relating to specified systems 1 to 13 include, but are not limited to:</p> <ul style="list-style-type: none"> (i) SS 2 – sign instruction on how to operate a fire alarm call point (ii) SS 3 – sign showing location of automatic door for accessibility (iii) SS 8 – sign advising not to use the lift in the event of fire (iv) SS 8 – sign indicating the lift’s rated load in persons and kilograms (v) SS 8 – sign showing location of lift for accessibility (vi) SS 12 – international symbol for deafness. <p>Examples SS 15/4:</p> <p>Examples of signs to facilitate evacuation include, but are not limited to:</p> <ul style="list-style-type: none"> (i) exit sign (ii) directional sign (iii) no exit sign. 		<p>General</p> <p>Signs require regular inspection to ensure they operate as required by the performance standard.</p> <p>Content and frequency of inspections</p> <p>Where illumination of signage is necessary, the procedures of SS 4 should be used to verify that illumination occurs for the required duration.</p> <p>Where available, signage should be inspected in accordance with the published Standard or the performance specification of the associated specified system.</p> <p>The following minimum checks should be carried out when appropriate to the installation.</p> <p>Monthly inspection</p> <p>Illuminated signs should be inspected to ensure they are:</p> <ul style="list-style-type: none"> B.1 of the correct type B.2 present and in the right locations B.3 legible B.4 illuminated. <p>Annual inspection</p> <p>Signs not required to be illuminated should be inspected to ensure they are:</p> <ul style="list-style-type: none"> B.5 of the correct type B.6 present and in the right locations B.7 legible. <p>Signs required to be illuminated should be tested to ensure they:</p> <ul style="list-style-type: none"> B.8 remain illuminated in the event of a failure of the main lighting supply, for the same duration as required by Clause F6 Lighting for Emergency. 	

Inspections (continued)**Specific considerations****SS 12 Audio loops or other assistive listening systems**

B.9 Checks should be made to ensure the following signs or displays are present and in the right locations, where required.

B.9.1 Approved international signage indicating audio loop availability is displayed at entrances to the venue, auditorium, room or area.

B.9.2 A map or a display of the area covered by the audio loop, its location if coverage is limited within the venue, and directions to the indicated area are displayed.

B.9.3 Where counterloops are installed, each counter displays a sign indicating availability.

B.9.4 The transmission channel used for the venue is displayed at the entrances to the venue to allow users to adjust their receivers to the frequency channel in use.

SS 13/2 Natural smoke control

B.10 Checks should be made to ensure any operational signage for the ventilator is still in place and legible.

C. Maintenance

Responsive maintenance should be carried out in accordance with the nominated performance and inspection Standard of the associated system, and to ensure signs remain correctly-positioned and legible and where appropriate ensure the escape route is identified.

SS 16 Cable Cars

A.	Scope
	<p>Every cable car must be listed on a compliance schedule where the cable car is attached to or services a building.</p> <p>Examples:</p> <p>Examples of cable cars include, but are not limited to:</p> <ul style="list-style-type: none"> (i) a cable car attached to or servicing a building used as a single household unit (ii) a ski chair lift which carries people in an enclosed vehicle and operates wholly or partially inside a building.
B.	Inspections
	<p>General</p> <p>A cable car must be regularly inspected and tested to ensure it will always operate safely.</p> <p>Content and frequency of inspections</p> <p>Depending on the type of installation and its performance standard, the following referenced Standard or document may be used.</p> <p>For cable cars that are installed according to NZS 5270:</p> <ul style="list-style-type: none"> • B.1 Inspections and checks should be made according to the checklist on page 56. <p>For other installations:</p> <ul style="list-style-type: none"> • B.2 a specifically designed solution prepared by a person who, based on experience and qualifications, is competent to do so.
C.	Maintenance
	<p>Planned preventative maintenance and responsive maintenance should be done according to the nominated performance and inspection Standard or document, and must ensure the system will always operate safely.</p>

Checklist

Checklist suitable for cable cars complying with NZS 5270		
	Reference	Initials and comments
Machinery space		
Visual inspection of machine supports, holding down bolts, etc		
Check condition of machinery enclosure and its access	3.1, 3.2, 3.3	
Check there are no obstructions or rubbish in or around the machinery enclosure		
Check that lighting in machinery area functions	3.3	
Check for presence of circuit diagrams and instruction manual	13.5	
Machinery		
Check condition of drum or traction sheave, with special attention to grooves	9.1	
Check the condition and operation of the brake and condition of brake linings	4.3	
Check the running of machines, gearboxes, motors and their bearings	4.2, 4.4	
Runway		
Inspect and test safety gear	14	
Visual check of runway		
Check rope for attachments and terminations correct and in good condition, number of broken wires within acceptable limits, fillings not being shed, in generally good condition	8.1	
Visual check of guide rails for straightness and security		
Check there are no obstructions or rubbish along the track		
Check function of any lighting	7.5, 13.7	
Check drainage at bottom of track		
Visual check of buffer condition	6	
Car		
Check functioning of any car lighting		
Check condition of guides or rollers	9	
Check function of car controls	14	
Observe operation of powered doors (if applicable)		
Check load rating plate present		
Check correct operation of alarms and emergency telephone (if applicable)		
Check any exit arrangement	5	
Landing doors		
Check door interlocks	7.4	
Operation		
Check operation of door interlocks, limit switches, slack rope switch, stop switches and other safety switches	7.4, 11.4	
Check operation of overload detector	4.2.3	
Landings		
Check stopping at landings	5.1	
Check landing controls	14.2	
Check condition of landing barriers	7.3	
General		
Visual check for any repairs or modifications done incorrectly		
Check maintenance records are properly kept		