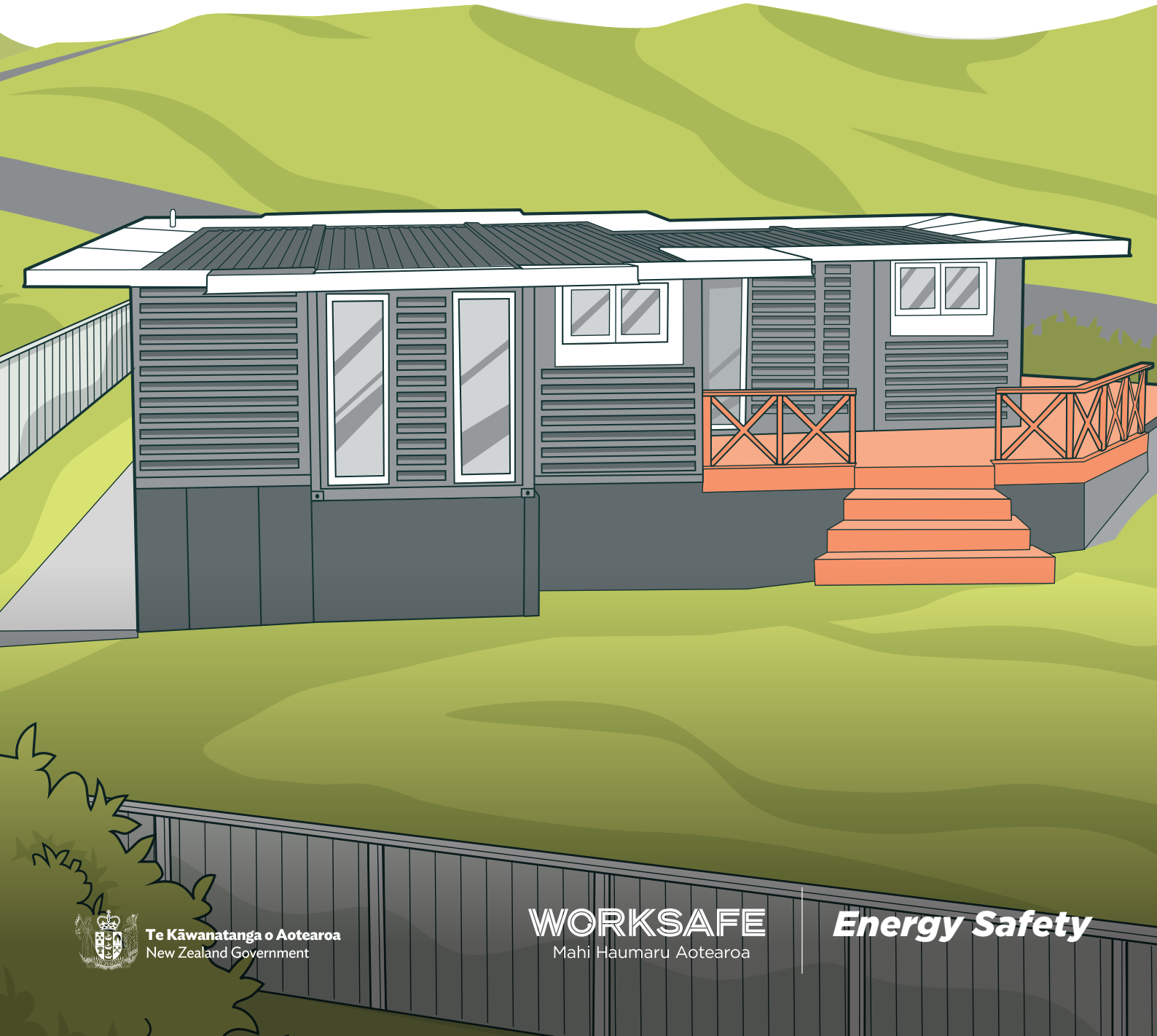
QUICK GUIDE

Electrical safety for low voltage electrical installations in imported buildings

INFORMATION FOR IMPORTERS AND ELECTRICAL WORKERS

May 2024



Te Kāwanatanga o Aotearoa
New Zealand Government

WORKSAFE
Mahi Haumaru Aotearoa

Energy Safety

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NOTE TO READERS

Use of 'must', 'should', and 'could'

The words 'must', 'should', and 'could' indicate whether:

- an action is required by law, or
- is a recommended practice or approach.

TERM	DEFINITION
Must	Legal requirement that you must comply with
Should	Recommended practice or approach

Key terms

The glossary in Appendix 1 of this guide has a list of the technical words, terms, and abbreviations used in this guide, and explains what they mean.

Lists

Lists of examples are not intended as complete lists. They may list some but not all possible examples.

Illustrations

Illustrations are a guide only. They are not intended to provide technical specifications.

1.0 Introduction

What is this guide about?

Buildings imported into New Zealand often have wiring and fittings such as power points and lights (known as an 'electrical installation') already built in. Wiring and electrical fittings installed overseas may not be electrically safe or meet required New Zealand safety standards. Unsafe wiring and fittings can lead to an increased risk of electric shock or fire.

Buildings imported into New Zealand with a pre-installed electrical installation must be electrically safe and comply with the Electricity (Safety) Regulations 2010 (the Regulations) and the Electricity Act 1992 (the Act)

This guide provides information on what must be done to make sure imported buildings are electrically safe before they are connected to an electricity supply in New Zealand. This guide should be used alongside the Regulations and the Act. It does not remove any obligation to comply with the Regulations, the Act, and any other New Zealand legislation.

This guide covers:

- what must be done to make sure the **electrical installation** within an imported building is safe for use in New Zealand, and has all required certifications and documentation. There are two approaches that can be taken to verify the electrical safety of an imported building's electrical installation. Which approach is used depends on how the electrical work was done overseas. This guide explains what these two approaches are and when you should/can use either approach
- what must be done to make sure **fittings** that make up part of an electrical installation within an imported building are safe, and have all required certifications and documentation
- what checks and certifications must be done before an imported building's electrical installation can be connected to an electricity supply in New Zealand.

Who does this guide apply to?

Importers of buildings with pre-installed wiring and fittings

Any person or business who imports (or is thinking about importing) a building that includes an electrical installation should follow this guidance. This includes businesses or persons that are importing buildings made according to their own specifications.

Part A of this guide provides information to importers on what they must do to make sure the electrical installation and fittings within their imported building is electrically safe and compliant before being provided for sale or supply in New Zealand.

Electrical workers

In this guide, an electrical worker is a person authorised to do prescribed electrical work (PEW) under a current New Zealand practising licence or employer licence, such as a New Zealand registered electrician.

Electrical workers should read this guide before connecting an imported building that includes an electrical installation to a power supply.

Part B of this guide provides detailed information for electrical workers on the requirements for verifying the safety of an imported building with pre-installed wiring and fittings before it is connected to a power supply.

What buildings are covered by this guide?

In this guide, an imported building includes buildings that are intended to be used in a permanent or semi-permanent position. This includes (but is not limited to):

- container homes
- tiny houses
- kiosks
- sleepouts or cabins.

These buildings may be imported:

- fully constructed
- in a flat pack
- as a kitset
- in prefabricated parts.

This guide does not apply to imported buildings that can be readily moved from one site to another and easily connected to a power supply by a plug lead mobile (known as 'connectable electrical installations'), for example:

- recreational vehicles such as camper vans and motor homes
- horse floats
- food and drink vending vans and trailers.

What is an electrical installation?

An 'electrical installation' is all the fixed wiring and components that are associated with the use of electricity within a building, for example, allowing the occupier to use the lights or appliances within a building. The electricity can be supplied from the grid or from an independent power source, such as solar power.

In this guide, electrical installations do not include:

- plug-in appliances
- telecommunications, such as fibre internet connections
- fittings, such as powerlines, owned or operated by a power company that provides electricity to the building.

For the full definition of an electrical installation, see section 2 of the Act.

What are electrical fittings?

Electrical fittings are the components that make up an electrical installation. Examples of fittings include power points, lights, and switches.

If the building comes as flat pack or kitset, some of the electrical installation may be partially assembled with some fittings being included in the pack.

Figure 1 shows the relationship between fittings, an electrical installation, and a building.

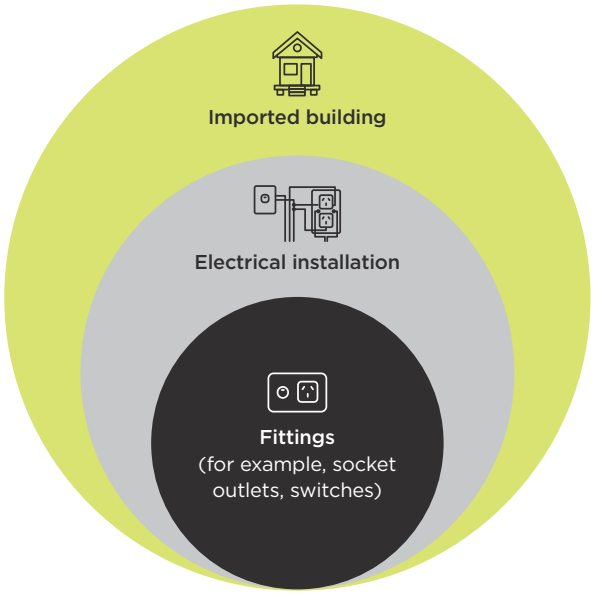

FIGURE 1:
Imported building – fittings sit within the low voltage electrical installation

Figure 2 shows common fittings in an electrical installation within a typical imported building.

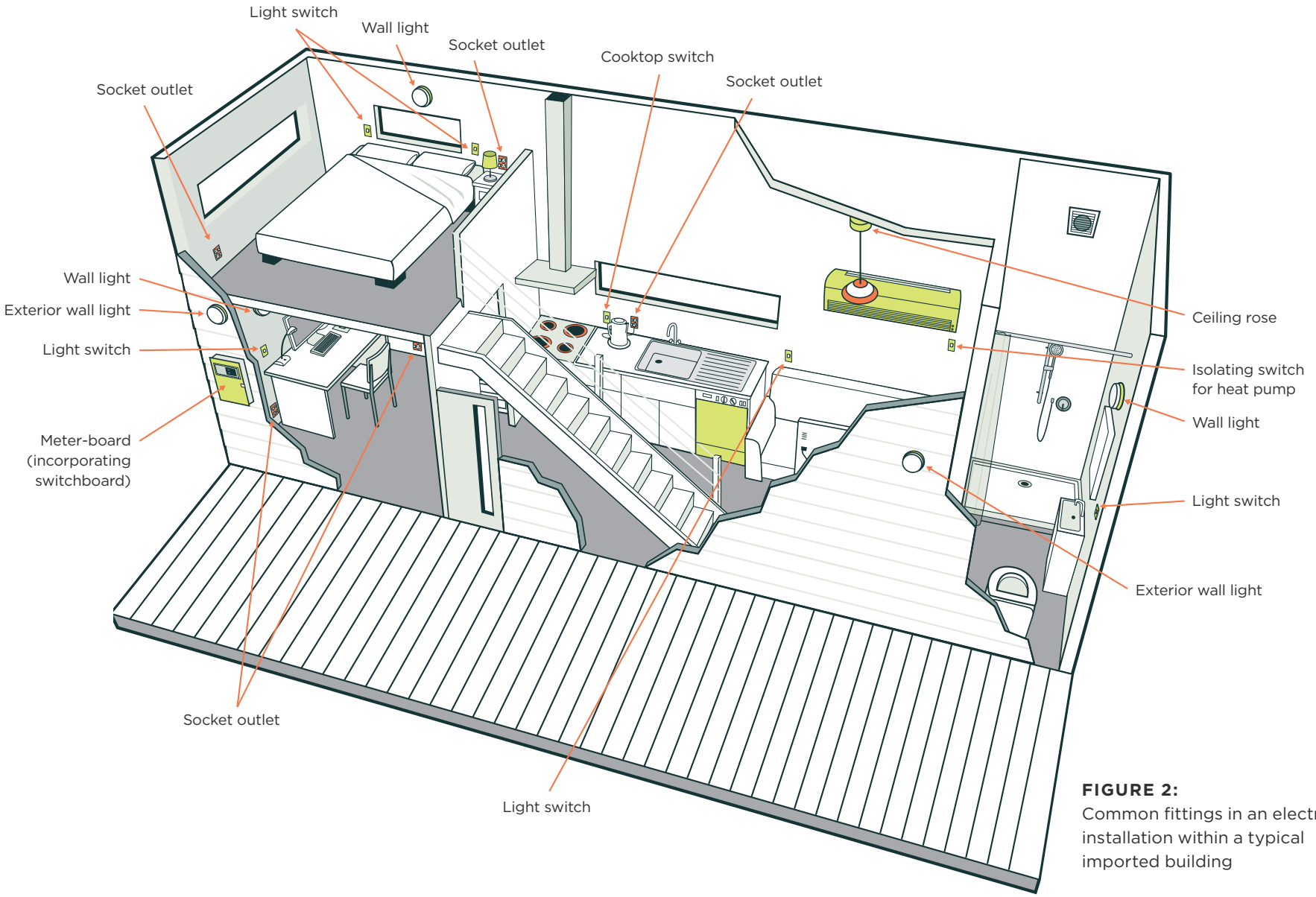

FIGURE 2:
Common fittings in an electrical installation within a typical imported building

Part A
Information for importers

2.0 Requirements for the supply of an electrical installation in an imported building

If you intend to import a building with a pre-wired electrical installation, you must verify that the installation is compliant with the Regulations and the Act and will be electrically safe when used in New Zealand. This must be done before it is offered for sale or supply.

As the importer, you must be able provide confirmation that the electrical installation complies with *AS/NZS 3000 incorporating amendments – Electrical Installations* (known as the Wiring Rules).

When electrical work is done in New Zealand, the work must be done or supervised by a person with current New Zealand authorisation to do prescribed electrical work (such as an electrician) in accordance with the Wiring Rules. This person would then issue the relevant certification, such as a Certificate of Compliance (CoC), for the electrical installation to confirm it meets all legal requirements.

If the electrical work is done overseas, it may not comply with the Regulations. If you cannot verify the electrical work was done in accordance with New Zealand regulations and do not have a CoC for the installation, a different approach (called the assessment approach) is needed to make sure the installation will meet the requirements of the Regulations. Following the assessment approach will produce a Record of Assessment (RoA) that may be used instead of a CoC. There is more information about the assessment approach in Section 7.0.

In addition to having a CoC or an RoA, you also need to produce an Installation Supplier Declaration of Conformity (I-SDoC) for the electrical installation. This current section focuses on the I-SDoC you need to provide for the electrical installation before it is connected.

> Where possible you should make sure your imported building's electrical installation work is done in accordance with the Wiring Rules at the point of manufacture. If it is not, there is a risk that the building's electrical installation may be non-compliant and require re-wiring before it can be connected to an electricity supply in New Zealand.

In New Zealand the electricity supply is 230 Volts at a frequency of 50 Hertz.

Note: Individual fittings that may make up part of the installation may also need individual SDoCs. Section 3.0 of this guide provides more information on requirements for individual fittings.

What is an Installation Supplier Declaration of Conformity (I-SDoC)?

An I-SDoC for the electrical installation is a document that will give assurance that an electrical installation is electrically safe for use and complies with relevant standards in New Zealand. It can be used to document and transfer information about the safety of the electrical installation from the importer to the person receiving the installation.

An I-SDoC for the imported building's electrical installation should be completed by or on behalf of the importer.

An I-SDoC should conform to *ISO/IEC 17050-1 Conformity Assessment* and should contain the information listed below:

- unique identification of the I-SDoC
- full legal name and contact address of the New Zealand importer as the issuer
- unique identification and description of the electrical installation, including:
  - make (brand name)
  - model (type of installation or description)
  - serial number range (or other identifiers) if the I-SDoC covers more than one building
  - specifications of the use (for example, whether it is residential or commercial, its purpose and any limitations of the connection or its use)
- a declaration that the electrical installation complies with the Wiring Rules
- a complete and clear list of supporting compliance documentation that the I-SDoC is based on
- the name and contact details of each person or party who issued the supporting compliance documentation
- date and place of issue of the I-SDoC
- signature, full legal name, and function of the importer or the person authorised to act on behalf of the importer
- any limitation on the validity of the I-SDoC.

The I-SDoC should be accompanied by a report which has the following:

- a list of all fittings and appliances contained in the electrical installation, including make, model, and ratings
- design documentation, including drawings and circuit diagrams of the electrical installation
- manufacturer's instructions and safety messages for the end users of the electrical installation, and each fitting and appliance contained in the installation
- copies of SDoCs for all fittings and conductors, and appliances used in the installation (see Section 3.0 for more information)
- results of manufacturers' testing to confirm critical elements (for information on the testing requirements, see Section 8 of the Wiring Rules).

Seek the advice of an appropriately qualified electrical worker if you are unsure of the details required for the I-SDoC or the accompanying information.

3.0 Requirements for the supply of electrical fittings in an imported building

This section covers requirements related to the electrical fittings that are supplied as part of an electrical installation in an imported building with pre-installed wiring.

If the fittings in an imported building have been sourced and assembled overseas, there is a risk that they may be incompatible or electrically unsafe for use in New Zealand.

As well as having either a CoC or an RoA, and an I-SDoC for the installation, you will also need to provide documentation to verify the electrical safety and compliance of the fittings that make up parts of the installation.

All electrical fittings are required to be electrically safe for use in New Zealand. Some fittings require additional controls. These fittings are **declared medium-risk articles** or **declared high-risk articles**. These are fittings that have been assessed as having a greater risk if they are used and are not compliant with relevant standards.

Medium-risk and high-risk articles have specific requirements that are outlined below.

Declared medium-risk articles

Particular low voltage or extra-low voltage fittings or appliances may be declared as medium-risk articles.

Examples of medium-risk articles include:

- light fittings
- building wiring cables.

A complete list of medium-risk articles is published as a notice in the New Zealand Gazette and on WorkSafe's webpage Medium-risk product list

All medium-risk articles that you supply as a part of the imported building are required to either:

- be registered on the Electrical Equipment Safety System (EESS) database, or
- have a supplier declaration of conformity (SDoC) to verify that they meet New Zealand standards. See section Supplier declaration of conformity for more information.

Declared high-risk articles

Particular fittings that are medium-risk articles may also be declared high-risk articles.

Examples of high-risk articles include:

- miniature circuit breakers
- residual current devices
- socket outlets.

A complete list of these fittings is published in a Gazette Notice and on WorkSafe's webpage High-risk products

All electrical high-risk articles that you supply as a part of the imported building must:

- be registered on the Electrical Equipment Safety System (EESS) database, or
- have a **supplier declaration of conformity** (SDoC) to verify that they meet New Zealand standards (the same as for medium-risk articles). See section Supplier declaration of conformity for more information.

and

- have a recognised approval or deemed approval[1]
- an appropriate physical marking on the product itself to indicate the approval.

REQUIREMENT	MEDIUM-RISK ARTICLES	HIGH-RISK ARTICLES
SDoC or be registered on the EESS database	✓	✓
Approval and physical marking on product	✗	✓

TABLE 1: Requirements for medium-risk and high-risk articles

Non-declared articles

Fittings that are not declared medium-risk or high-risk articles should still be verified by a recognised test report that they comply with a relevant standard. If you are unsure what standards apply to any particular fitting, seek appropriate expert advice from a consultancy service who provides advice on electrical product safety and compliance matters.

Supplier Declaration of Conformity for electrical fittings

A supplier declaration of conformity (SDoC) is a document that gives assurance that an electrical fitting is electrically safe for use and complies with a relevant standard. If the medium-risk or high-risk article is not registered in the EESS database, you will need to produce an SDoC for each fitting instead.

An SDoC for a fitting must:

- describe the medium-risk or high-risk article
- state that the article complies with the correct and full standard/s listed in Schedule 4 of the Regulations specific to that product, or *AS/NZS 3820 Essential safety requirements for electrical equipment*
- be in the form that is prescribed by WorkSafe or, if no form is prescribed, comply with *ISO/IEC 17050–1*.

For more information on SDoCs, and to see an example template, see WorkSafe's webpage Supplier declaration of conformity

[1] Products registered on the EESS database are deemed as having WorkSafe approval, provided the New Zealand manufacturer or importer is also listed on the EESS database as the responsible or affiliated supplier of that specific product in New Zealand.

4.0
Getting a building ready to be connected to a power supply

Before the imported building is connected to a power supply, the electrical installation and fittings must have the required documentation as outlined in Sections 2 and 3 of this guide. The documentation should be put together into a dossier.

The dossier should include:

- a CoC or an RoA
- an I-SDoC and its supporting documents for the installation
- SDoCs or EESS documentation for all medium-risk and high-risk fittings
- product approvals for all high-risk fittings
- evidence that any other fittings meet relevant standards.

The importer is responsible for making sure the dossier contains all of the above. The dossier should then stay with the building and be passed to the retailer and/or final owner of the building.

The electrical worker doing the final connection will need to check the contents of the dossier and add further documentation to it related to the connection (as described in Part B of this guide).

Part B of this guide provides information for electrical workers on what steps they must take before and after a connection is done to make sure the installation and connection is electrically safe.

Connecting the installation to a power supply must be done by a person authorised to carry out prescribed electrical work.

Part B
Information for electrical workers

5.0 Requirements for connecting an imported building's electrical installation to an electricity supply

The connection of an electrical installation to an electricity supply is prescribed electrical work (PEW). It must be carried out by a person authorised under the Act such as a licenced electrical worker, or a competent person operating under an employer license.

The Regulations require that the electrical installation must be installed, tested, inspected, and connected in accordance with:

- *AS/NZS 3000 incorporating amendments – Electrical Installations* (known as the Wiring Rules), and
- any other standard specified for certain types of electrical installation, such as a photo-voltaic installation.

For more information, see regs 59 and 63 of the Regulations.

All connections must be carried out in accordance with the Regulations.

All mains work carried out for an imported electrical installation must be tested before connection to the power supply and certified by the electrical worker.

Considerations before connecting an imported electrical installation to a power supply

If you are asked to connect an electrical installation within an imported building with pre-installed wiring to the grid or an independent electricity supply, you must first obtain and compile evidence that demonstrates that the electrical installation and its component fittings comply with New Zealand law. You need to obtain the dossier produced by the importer that includes:

- a Certificate of Compliance (CoC) or Record of Assessment (RoA)
- an I-SDoC and its supporting documents for the installation
- SDoCs or EESS documentation for all medium-risk and high-risk fittings
- product approvals for all high-risk fittings
- evidence that any other fittings meet relevant standards.

If there is a CoC for the electrical installation

If the installation has a CoC issued you can use this to satisfy the requirement to verify that the installation complies with New Zealand law (reg 65 of the Regulations) and continue with the usual connection process (called the certification approach in this guide). Section 6.0 outlines the certification approach in more detail.

If there is no CoC for the electrical installation

Electrical work done overseas that has not been done or supervised by a person with a current New Zealand authorisation to do PEW will not have a CoC. The importer may have already had the installation assessed to make sure it is electrically safe and compliant. This is done using the **assessment approach** as outlined in Section 7.0 of this guide. There will be an RoA in the dossier instead of a CoC to document this. If this has not been done, you will need to follow the assessment approach as outlined in Section 7.0 of this guide before the connection is completed.

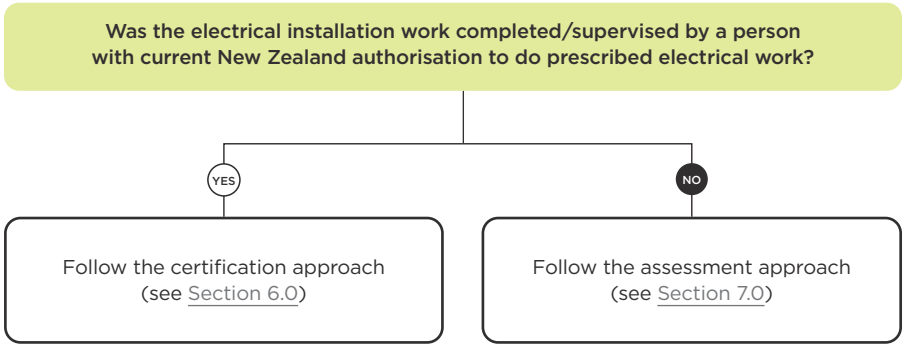

FIGURE 3:
When to use the certification approach or assessment approach

When you have confirmed that the electrical installation and fittings comply with New Zealand law and are electrically safe you can:

- issue a CoC for the mains work and the testing of the electrical installation
- connect it to the electricity supply
- complete the required electrical safety certificate (ESC).

6.0 The certification approach

The certification approach is mandated according to the Electricity (Safety) Regulations 2010 when conducting prescribed electrical work (PEW) in New Zealand. It is the usual approach taken for certifying electrical installations in buildings constructed in New Zealand.

The certification approach can only be used for imported buildings if the electrical work done overseas has been carried out or supervised by a competent person with current New Zealand authorisation to carry out PEW in accordance with current legislative requirements.

The below diagram summarises the main steps of the certification approach:

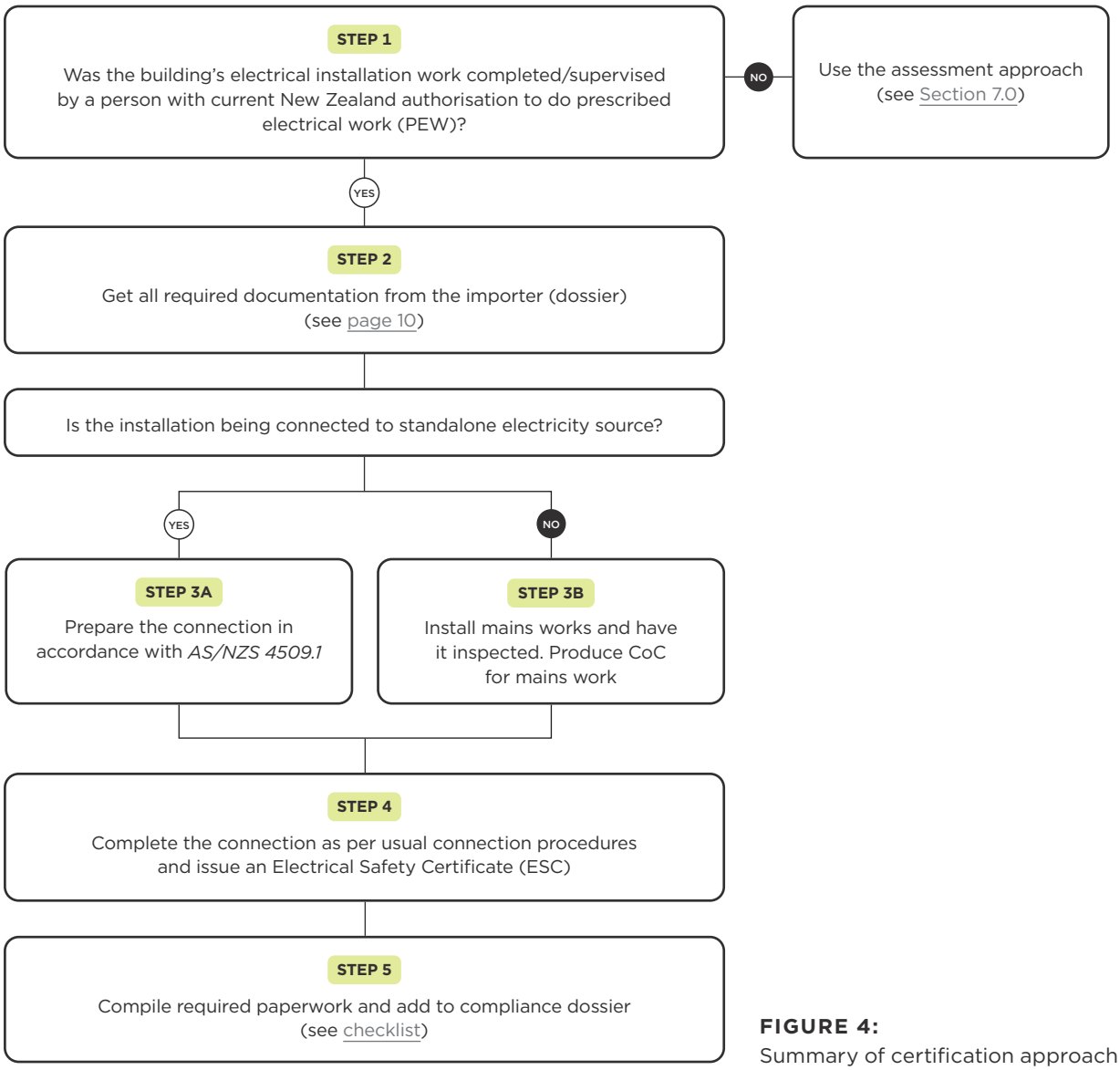

FIGURE 4:
Summary of certification approach

Step 1: Confirm that the building's electrical installation work was completed or supervised by a person with current New Zealand authorisation to do prescribed electrical work (PEW)

To make sure the overseas work was carried out by a competent person, check that the electrical work was installed, tested and certified:

- by an electrical worker with a current licence to practise in New Zealand, or
- under the supervision of an electrical worker with a current to practice in New Zealand, or
- within the scope of an employer licence[2] which specifically identifies the work to be carried out.

If you are unable to confirm that above requirements have been met, you will need to use the assessment approach. See The assessment approach for more information.

Step 2: Get all required documentation from the importer

Each electrical installation must have been tested when it is constructed in accordance with regulations 59 and 63 of the Regulations, and those results recorded. The importer should have prepared a dossier containing the following:

- Certificate of compliance (CoC) issued in accordance with regs 65, 66 and 67 of the Regulations
- Installation Supplier Declaration of Conformity (I-SDoC) for the electrical installation
- Supplier Declaration or Conformity (SDoC) for all fittings.

The electrical worker constructing and/or certifying an electrical installation is responsible for checking whether the fittings are compliant with New Zealand requirements and can be safely connected to a power supply.

For all declared medium-risk or high-risk articles, regulation 83(3A) of the Regulations allows an electrical worker to rely on an SDoC for the purpose of certifying the electrical installation.

Step 3: Prepare the connection/install mains work

Connecting to a standalone electricity source (Step 3a)

If the connection is being made to a standalone electricity source (such as solar power) prepare the connection in accordance with *AS/NZS 4509.1*.

Connecting to the grid – install mains work (Step 3b)

If the connection is being made to the grid, install the mains work and make sure the high-risk PEW involved with the connection is inspected in accordance with regulations 70 and 71

Produce a Record of Inspection (RoI) and CoC for the mains work.

Details of high-risk PEW (including details of the CoC provided in respect of that work) must be lodged on the database referred to in regulation 112A (Electricity and Gas High-risk database) by the person who inspected the work.

[2] When using the employer licence approach, a certified design may be used to provide guidance as to how the work is carried out.

Step 4: Connect the electrical installation to an electricity supply

Once steps 1 to 3 have been completed, the connection can be carried out as per the requirements of regulation 73A

Regulation 73A sets the principal requirements for persons connecting an electrical installation to a supply of electricity. This regulation brings together all the elements that control the safety of an electrical installation.

> 'Connection' refers to the PEW that is the final step that will allow electricity to flow in the electrical installation or part installation, on which other PEW has been done.

The person making the connection must be satisfied that:

- the installation is safe to connect
- the testing required by the electricity regulations has been done
- a CoC has been completed for all the PEW performed in New Zealand
- if the work is required to be inspected, a RoI has been prepared for that work.

See regulation 73A of the Regulations for the full requirements.

Complete an electrical safety certificate (ESC)

Once a connection to a supply has been completed, regulation 74A requires that an electrical safety certificate is issued. See regulation 74A for the full requirements.

Compliance with the building code

Regulation 74A(5) provides that an ESC can be used to confirm compliance with Clause G9 – Electricity in Schedule 1, The Building Code in the Building Regulations 1994 regarding electricity safety.

> If the electrical installation is not yet in a permanent location, assign a unique identifier to be used on the CoC/ESC, for the purpose of identifying the location of the installation. If the final location is known, use that location. For more information, see regulation 74I

Step 5: Add documentation to compliance dossier

On completion of the connection, add relevant certificates and associated documentation to the existing dossier for the owner of the electrical installation. A copy of the information should be kept by the assessor and be made available should it be requested from a regulator.

The dossier should include the following documentation:

- an I-SDoC from the importer (including design documentation, such as drawings and circuit diagrams of the electrical installation)
- SDoCs or EESS documentation for all medium-risk and high-risk fittings
- a list of all fittings contained in the electrical installation including make, model, and ratings
- a CoC for the electrical installation and record of tests required in accordance with *Part 2 AS/NZS 3000*
- CoCs for all PEW associated with the earthing and supply of electricity to the electrical installation (mains work) (if relevant)
- RoI for mains work, including the main earthing system (if relevant)
- an ESC for the electrical installation certifying its safety for use
- manufacturer's instructions and safety messages for each fitting and appliance contained in the installation
- any other relevant compliance documentation from the manufacturer.

This check list only covers items relating to the electrical installation and fittings. There may be other documentation added to it relating to any appliances supplied within the building (for example rangehoods or dishwashers).

7.0 The assessment approach

The assessment approach as outlined in this section is an effective way to systematically, as far as reasonably practicable, through inspection and/or testing, determine whether the electrical installation and all its fittings are in an electrically safe condition for use.

Use the assessment approach to assess the compliance of the electrical installation work carried out overseas and not done or supervised by a person with a current New Zealand authorisation to do PEW.

An assessment should be carried out by a competent electrical inspector who has the skills to assess manufacturers' test reports for imported electrical fittings.

This section outlines the checks, tests, and documentation (including certification) necessary to enable electrical workers in New Zealand to:

- verify that all relevant testing has been conducted, and documented with a record of assessment
- verify that a compliance dossier for the electrical installation has been made
- confirm the electrical installation is safe to connect and use in accordance with regulation 73A

The diagram below summarises the main steps of the assessment approach:

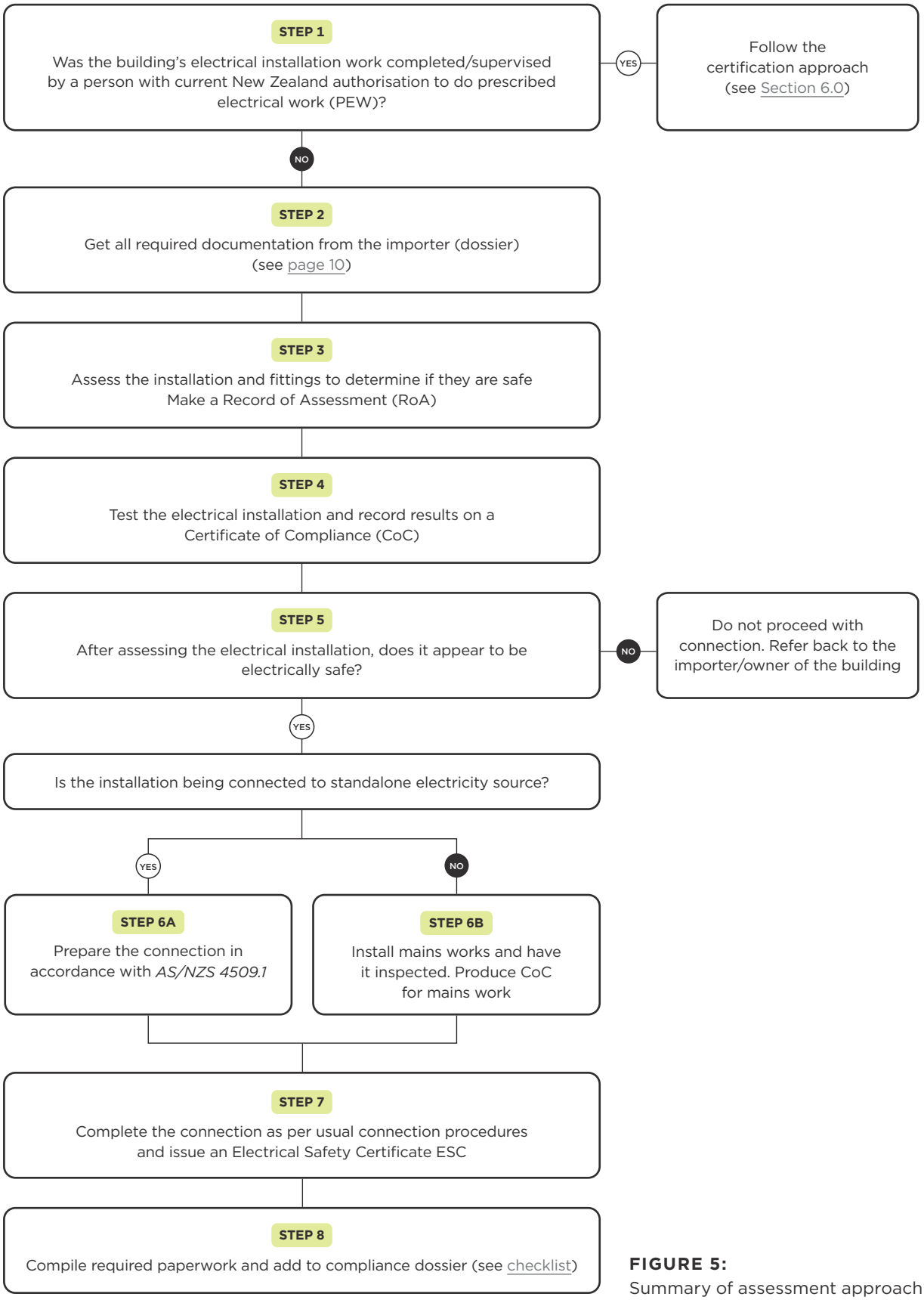

FIGURE 5:
Summary of assessment approach

Step 1: Confirm that the building's electrical installation work was **not** completed or supervised by a person with current New Zealand authorisation to do prescribed electrical work (PEW)

If the importer has been unable to provide a CoC for the installation you will need to take a different approach ensure that the electrical installation is electrically safe and compliant before it is connected.

If you are able to confirm that the electrical installation work was completed or supervised by a person with current New Zealand authorisation to do PEW, you can use the certification approach. See The certification approach for more information.

Step 2: Get all required documentation from the importer

The importer should have prepared a dossier containing the following:

- Supplier Declaration or Conformity (SDoC) for all fittings
- Installation Supplier Declaration of Conformity (I-SDoC) for the electrical installation.

Step 3: Assess the installation and fittings to determine if they are safe. Make a Record of Assessment (RoA)

An RoA as outlined below may be used as an alternative to the requirement for a CoC under regulation 65

The RoA must be prepared in accordance with:

- Part 1 of the *Wiring Rules*
- *Section 5 of AS/NZS 3019 Electrical installations – Periodic verification*.

As a part of preparing the RoA, you need to check the documentation for the installation and fittings you have obtained from the importer:

- You need to confirm whether the installation can be safely connected to a power supply.
  - Check the I-SDoC from the importer to make sure it complies with AS/NZS 3000. It is important that the I-SDoC adequately describes the electrical installation covered by the declaration (see Section 2.0 for more information).
- You need to take the following steps to confirm whether the fittings can be safely connected to a power supply:
  - Make sure you have copies of SDoCs for all the fittings that have been installed and check the SDoCs against the fittings used in the electrical installation.
  - Most of the fittings used for an electrical installation will be declared medium-risk articles, and will require an SDoC to confirm compliance with a recognised product standard. See Schedule 4 Standards applicable to fittings and appliances of the Regulations.
  - For all declared medium-risk or high-risk articles, regulation 83(3A) allows an electrical worker to rely on an SDoC for the purpose of certifying the electrical installation.

The RoA, I-SDoC and SDoCs will be needed when the final connection is made and referenced on the ESC and attached as a part of documentation for the imported building. For more information, see Step 8: Add documentation to compliance dossier

Step 4: Test the electrical installation and record results on a Certificate of Compliance (CoC)

Test the electrical installation in accordance with section 8 of *AS/NZS 3000*:

- for operational safety
- to ensure that the electrical installation is electrically safe.

Record the test results on a CoC.

Step 5: Do you deem the installation and fittings to be electrically safe?

If the results of your RoA and CoC show the installation and fittings appear electrically safe to be connected to an electricity source, go to step 6.

If you assess that any part of the installation or any of the fittings do not meet New Zealand electrical safety requirements, do not proceed with any further connection work. Refer back to the owner/importer of the building. Once the identified issues have been resolved/rectified you will need to re-assess and re-test the installation and fittings as per steps 3 and 4.

Step 6: Prepare the connection/install mains work

Connecting to a standalone electricity source (Step 6a)

If the connection is being made to a standalone electricity source (such as solar power) prepare the connection in accordance with *AS/NZS 4509.1.*

Connecting to the grid – install mains work (Step 6b)

Install the mains work and produce a CoC for the mains work.

Get all high-risk PEW involved with the connection inspected and a Record of Inspection (RoI) produced in accordance with regulations 70 and 71

The electrical inspector carrying out the inspection should sight the mains work CoC and the RoA (Step 3) for the electrical installation.

It is important that the mains work CoC and RoA adequately describe the parts of the installation covered by them.

Note: Details of high-risk PEW (including details of the CoC provided in respect of that work) must be lodged on the database referred to in regulation 112A of the Regulations (Electricity and Gas High-risk database) by the person who inspected the work.

Step 7: Connect the electrical installation to an electricity supply

Once steps 1 to 6 have been completed, the connection can be carried out as per the requirements of regulation 73A

Regulation 73A sets the principal requirements for persons connecting an electrical installation to a supply of electricity. This Regulation brings together all the elements that control the safety of an electrical installation.

> ‘Connection’ refers to the PEW that is the final step that will allow electricity to flow in the electrical installation or part installation, on which other PEW has been done.

The person making the connection must be satisfied that:

a. the installation is safe to connect

b. the testing required by these regulations has been done

c. a CoC has been completed for all the PEW performed in New Zealand

d. if the work is required to be inspected, a RoI has been prepared for that work.

Complete an electrical safety certificate (ESC)

Once a connection to a supply has been completed, regulation 74A requires that an electrical safety certificate is issued.

Because there is no CoC for the imported electrical installation, other than electrical work done in New Zealand, it is critical that the ESC describes the electrical installation being certified in detail.

The ESC would then reference the I-SDoC and the RoA in accordance with Part 1 of *AS/NZS 3000* and section 5 of *AS/NZS 3019*.

Compliance with the building code

Note that regulation 74A provides that an ESC can be used to confirm compliance with the Building Code clause G9 regarding electricity safety.

> If the electrical installation is not yet in a permanent location, assign a unique identifier to be used on the CoC/ESC, for the purpose of identifying the location of the installation. If the final location is known use that location. For more information, see regulation 74I

Step 8: Add documentation to compliance dossier

On completion of the connection, add relevant certificates and associated documentation to the existing dossier for the owner of the electrical installation. A copy of the information should be kept by the assessor and be made available should it be requested from a regulator.

It is recommended that the following documentation is included in the dossier:

- a signed statement by the importer (I-SDoC) that confirms that the electrical installation complies with *AS/NZS 3000*
- record of assessment issued in accordance with Part 1 of *AS/NZS 3000* and Part 5 of *AS/NZS 3019* for the electrical installation
- a CoC for the installation tests in accordance with Section 8 of *AS/NZS 3000*
- SDoCs or EESS documentation for all medium-risk and high-risk fittings
- a list of all fittings contained in the electrical installation including make, model, and ratings
- evidence that any other fittings meet relevant standards.
- CoCs for all PEW associated with the earthing and supply of electricity to the electrical installation (mains work)
- a RoI for mains work, including the main earthing system
- an ESC for the electrical installation certifying it is safe to use
- design documentation, including drawings and circuit diagrams of the electrical installation
- manufacturer's instructions and safety messages for each fitting and appliance contained in the installation,
- other relevant compliance documentation from the manufacturer.

This check list only covers items relating to the electrical installation and fittings. There may be other documentation added to it relating to any appliances supplied within the building (for example rangehoods or dishwashers).

Questions

If you have any questions about this guidance, please contact us at:
info@energysafety.govt.nz

Appendix 1: Glossary

TERM	MEANING
Assessment approach	An effective assessment approach involves systematically evaluating various factors to make informed judgments or decisions. Thorough inspection and/or testing is intended, as far as reasonably practicable, to determine whether the installation and all its fittings are in an electrically safe condition for use.
Certification approach	This method is mandated according to the Electricity (Safety) Regulations 2010 when conducting prescribed electrical work (PEW) in New Zealand.
Certificate of compliance (CoC)	The CoC indicates that the work done is electrically safe and has been carried out in accordance with New Zealand's regulations, electrical safety standards and codes.
Competent person	In this guide, a 'competent person' is a person, who has acquired, through training, qualification or experience or a combination of these, the knowledge and skill enabling that person to perform the required task correctly.
Declared high-risk article	Refers to certain electrical fittings that pose a high level of risk in terms of safety in relation to energy. These require a recognised approval or deemed equivalent certification, including individual product marking of approval prior to sale.
Declared medium-risk article	Refers to certain electrical fittings that pose a medium level of risk in terms of safety in relation to energy. These require a valid Supplier Declaration of Conformity (SDoC) prior to sale.
Electrical (Safety) Regulations 2010 (the Regulations)	These regulations state the generic rules and requirements for electrical safety and what is deemed to be electrically safe and unsafe. They deal with the design, construction and use of works, installations, fittings and appliances.
Electrical equipment safety system (EESS)	Means the harmonised Australian/New Zealand Electrical Equipment Safety System. It is a regulatory framework aimed at increasing consumer safety in household electrical equipment throughout participating jurisdictions in Australia and New Zealand.
Electrical fitting	Means everything used, or designed or intended for use, in or in connection with the generation, conversion, transformation, conveyance, or use of electricity.
Electrical installation	Electricity (Safety) Regulations 2010 definition: a. means: i. in relation to a property with a point of supply, all fittings beyond the point of supply that form part of a system that is used to convey electricity to a point of consumption, or used to generate or store electricity, and ii. in relation to a property without a point of supply, all fittings that form part of a system that is used to convey electricity to a point of consumption, or used to generate or store electricity, but b. does not include any of the following: i. an electrical appliance ii. any fittings that are owned or operated by an electricity generator and that are used, designed, or intended for use in or in association with the generation of electricity, or used to convey electricity from a source of generation to distribution or transmission lines iii. any fittings that are used, designed, or intended for use in or in association with the conversion, transformation, or conveyance of electricity by distribution or transmission lines. *AS/NZS 3000* NZ Wiring Rules definition: Electrical equipment installed for the purposes of conveyance, control, measurement or use of electricity, where electricity is or is to be supplied for consumption.
Electrical safety certificate (ESC)	Issued by an electrical worker when the electrical worker doing the final connection is satisfied the installation or part installation is safe to use, on the grounds that it is electrically safe and complies with the Regulations and relevant standards.
Electrical worker	A person who is authorised to do, or assist in doing, PEW under a current practising licence.

TERM	MEANING
Electricity Act 1992 (the Act)	The Electricity Act is designed to protect the health and safety of members of the public in connection to electricity and provide for the regulation, supply, and use of electricity in New Zealand.
Electricity and Gas High Risk Database	The database provides public access to key mandatory information about where work classified as high-risk prescribed electrical work including the location of where the work was carried out and who certified it and who inspected this work.
Imported building	A building that is manufactured overseas and is imported into New Zealand. This includes, but not limited to, container homes, 'tiny houses', kiosks, and similar buildings such as kitsets or prefabricated sleepouts or cabins.
Importer	An importer is a business or undertaking by or for whom goods are imported. Importing means the arrival of goods in New Zealand in any manner, from a point outside New Zealand. For a full legal definition of importer see section 2(1) of the Customs and Excise Act 1996
Installation supplier declaration of conformity (I-SDoC)	A document that contains a description of the installation and a test report confirming how it complies with a required standard. This is generated by the importer and is based on an SDoC as defined in ISO 17050-1.
New Zealand Gazette	The official Government newspaper and authoritative journal of constitutional record.
Prescribed electrical work (PEW)	Electrical work of a type described in Clause 1 of Schedule 1 of the Electrical (Safety) Regulations 2010. It is work that involves installation, maintenance, repair, or servicing work on electrical fittings, appliances and electrical equipment used in electrical installations.
Record of inspection (RoI)	The RoI provides a legally recognisable written record of what high-risk PEW was inspected and by whom.
Supplier declaration of conformity (SDoC)	A document that contains a description of the article and a test report confirming how it complies with the required standard or *AS/NZS 3820*. An SDoC is 'defined' in *ISO/IEC 17050-1* and is fundamentally a statement (claim) made by a supplier of a product that, that product meets a particular requirement.

Appendix 2: Extracts from the Electricity (Safety) Regulations 2010

The Regulations set out requirements for low voltage and extra-low voltage domestic electrical installations.

The person responsible for the installation work must meet all electrical installation requirements prescribed under Part 5 of the Regulations.

Note: Extracts from key relevant regulations are shown below. For the full requirements, see Electricity (Safety) Regulations 2010

REGULATION 59

Low and extra-low voltage installations to comply with *AS/NZS 3000*

1. Every low or extra-low voltage domestic installation, or part of a domestic installation, must be installed, tested, inspected, and connected so as to comply with Part 2 of *AS/NZS 3000* if it has a maximum demand at or below:
   a. 80 amperes per phase if single-phase, or
   b. 50 amperes per phase if multi-phase.
2. Every other low or extra-low voltage installation or part installation must be installed, tested, inspected, or connected so as to comply with either:
   a. Part 2 of *AS/NZS 3000*, or
   b. a certified design prepared in accordance with Part 1 of *AS/NZS 3000*.

REGULATION 63

Testing prescribed electrical work on low and extra-low voltage installations

1. All prescribed electrical work done on a low or extra-low voltage installation or part installation must be tested:
   a. for operational safety, and
   b. to ensure that the installation or part installation is not electrically unsafe, and
   c. as required by regulation 59 or 60, as the case requires, and
   d. in the case of an installation or part installation that does not comply with Part 2 of *AS/NZS 3000*, in accordance with the verification or testing process set out in the certified design for the installation or part installation.

REGULATION 65

Requirement for certificate of compliance

1. A certificate of compliance must be issued in accordance with these regulations for all general and high-risk prescribed electrical work done on an installation or part installation that comprises:
   a. the installation or maintenance of conductors used in the installation or part installation, or
   b. the installation or maintenance of fittings where the fittings are connected, or intended to be connected, to conductors used in the installation or part installation.

REGULATION 70

High-risk prescribed electrical work to be inspected

1. All high-risk prescribed electrical work done on a low or extra-low voltage installation or part installation must be inspected as required by regulation 59 or 60, as the case requires.
2. All high-risk prescribed electrical work done on a high voltage installation must be inspected so as to verify that the installation complies with:
   a. ECP 34, and
   b. regulations 34, 41(1), 42(1), 43(1), and 44(1), as if references in those regulations to works were references to high voltage installations.
3. A person who inspects high-risk prescribed electrical work must undertake whatever tests, visual inspection, or other actions are necessary to satisfy the person that:
   a. that work has been done in accordance with these regulations, and
   b. the installation or part installation on which that work has been done is, and will be when enlivened, electrically safe.

REGULATION 73A

Before connecting installations to power supply

1. Before connecting to a power supply a low or extra-low voltage installation or part installation on which prescribed electrical work has been done, the person doing the connection must:
   a. be satisfied that the installation or part installation is safe to connect, and
   b. be satisfied that the testing required by these regulations has been done, and
   c. if a certificate of compliance is required for the work, either issue or sight a certificate of compliance issued no earlier than 6 months before the installation or part installation is connected.

5. To avoid doubt, in this regulation connection refers to the prescribed electrical work that is the final step that will allow electricity to flow in the installation or part installation on which other prescribed electrical work has been done.

Appendix 3: List of relevant standards

AS/NZ 3000 incorporating amendments – electrical Installations (Wiring rules)

AS/NZS 3019 Electrical installations – Periodic verification

AS/NZS 4509.1 Stand alone power systems – Part 1: Safety and installation

AS/NZS 3820 Essential safety requirements for electrical equipment

ISO/IEC 17050-1

Disclaimer

This publication provides general guidance. It is not possible for WorkSafe to address every situation that could occur in every workplace. This means that you will need to think about this guidance and how to apply it to your particular circumstances.

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