

Healthier Homes Canterbury Quality and Audit Manual For Heating Installation

Version 1: Released on 5 September 2018

Contents

Part 1: Introduction	1
1.1 Purpose	1
1.2 Structure of this Manual	2
1.3 Amendments	2
Part 2: Healthier Homes Canterbury	3
Part 3: Measures to be installed	5
3.1 Accepted heating appliances for Healthier Homes Canterbury	5
Part 4: Installation of clean heating appliances	6
4.1 General guidelines for the Healthier Homes Canterbury Scheme	6
4.2 Sizing and installation of heat pumps	6
4.2.1 Sizing of heat pumps	6
4.2.2 Installation of heat pumps	7
4.3 Installation of wood burners and pellet fires	8
4.4 Installation of flued gas heaters	8
Part 5: Post-installation audits	10
Part 6: Environment Canterbury audits	11
6.1 Introduction	11
6.2 Principles of engagement	11
6.3 Types of audits	11
6.3.1 Regular audits – new Registered Suppliers	11
6.3.2 Regular audits – full Registered Suppliers	12
6.3.3 Re-audits	12
6.3.4 Specialist audits	13
6.4 Environment Canterbury audit process	13

6.5	Sanctions	14
6.6	Compliance failures and risk status	16
	Appendix A: Post-installation Audit Form	21
	Appendix B: Environment Canterbury – Healthier Homes Canterbury Technical Audit Form	23

Part 1: Introduction

1.1 Purpose

The Healthier Homes Canterbury Quality and Audit Manual for Heating Installation (“the Manual”) is produced for Registered Suppliers¹ who are contracted by Environment Canterbury to install heating in Canterbury through the Healthier Homes Canterbury scheme.

The purpose of the manual is to ensure that all heater installations under the scheme meet high standards of quality and deliver the benefits that Environment Canterbury and homeowners expect of the scheme by setting out the requirements in an open and transparent way, including:

- (i) the requirements for the installation of those products;
- (ii) other relevant requirements under the scheme;
- (iii) how the requirements are to be interpreted and applied generally and in specific situations;
- (iv) how Environment Canterbury will conduct audits of Registered Suppliers and their installations under the scheme;
- (v) how Environment Canterbury will quantify the performance of Registered Suppliers; and
- (vi) the sanctions Environment Canterbury will apply in the case of a Registered Suppliers’ failure to comply with the requirements set out in this manual.

Compliance with the Healthier Homes Canterbury Quality and Audit Manual for Heating Installation is a requirement under the Service Provider Agreement between Registered Suppliers and Environment Canterbury for the supply and installation of heating under the Healthier Homes Canterbury scheme.

The manual will also be used by Environment Canterbury’s auditors in the course of conducting audits of Registered Suppliers’ installations. The Manual will therefore ensure consistency by clearly setting out what is expected of Registered Suppliers and Environment Canterbury’s auditors assessing Registered Supplier’s performance against the Manual.

This Manual relates to the auditing of heating installations only. Auditing the installation of insulation is not covered by this Manual and is addressed through EECA’s QA processes for insulation installation.

KEY MESSAGE: Registered Suppliers (and their subcontractors) are contractually bound to adhere to the requirements set out in this Manual.

In this Manual:

¹ any reference to “Registered Suppliers” includes the organisation that entered into a Contract Agreement with Environment Canterbury, as well as any subcontractors or third parties engaged by that organisation in the delivery of measures under the scheme;

1.2 Structure of this Manual

The Healthier Homes Canterbury Quality and Audit Manual for Heating Installation should be read in conjunction with the Service Provider Agreement.

Following this introduction and general outline of the scheme, the Manual sets out the requirements for installations of products and Environment Canterbury's audit process. Appended to the Manual are the audit forms for the use of Registered Suppliers and external independent auditors.

1.3 Amendments

The Manual, as well as the documents incorporated by reference in the Manual (e.g. the list of Accepted Products) may be amended from time to time to bring it into line with any Environment Canterbury policy changes and/or revised Government legislation that impacts on installations.

Amendments to the Manual itself become binding for Registered Suppliers four weeks following notification of an amendment by Environment Canterbury. Notification will be by email with an amended Manual attached.

Amendments to documents incorporated by reference in the Manual (as they relate to the products accepted by Environment Canterbury for use under the scheme) will not be notified to Registered Suppliers because Registered Suppliers' agreements with Environment Canterbury set out the specific products Registered Suppliers are permitted to offer under the scheme.

KEY MESSAGES: The Healthier Homes Canterbury Quality and Audit Manual for Heating Installation will be amended from time to time. Registered Suppliers will be notified of amendments by email with the amendments taking effect four weeks after notification.

Amendments to documents incorporated by reference relating to the products accepted for use under the scheme will not be notified because Registered Suppliers are expected to regularly check the documents incorporated by reference.

Part 2: Healthier Homes Canterbury

Healthier Homes Canterbury has the aim of helping Canterbury ratepayers achieve warmer, healthier, drier homes. The scheme will enable ratepayers who meet the scheme's criteria to add the cost of home heating, insulation and/or ventilation products and installation to their rates bills.

The total amount available per ratepayer is from \$500 up to \$6,000 (including GST). The full amount is to be paid back via rates bills over nine years and includes an interest payment that covers all finance and overhead costs associated with the scheme.

Healthier Homes Canterbury will be available to all homes in the Canterbury region, refer: Figure 1 – Canterbury Map. This includes households of all income levels and owner-occupied properties and rental properties.

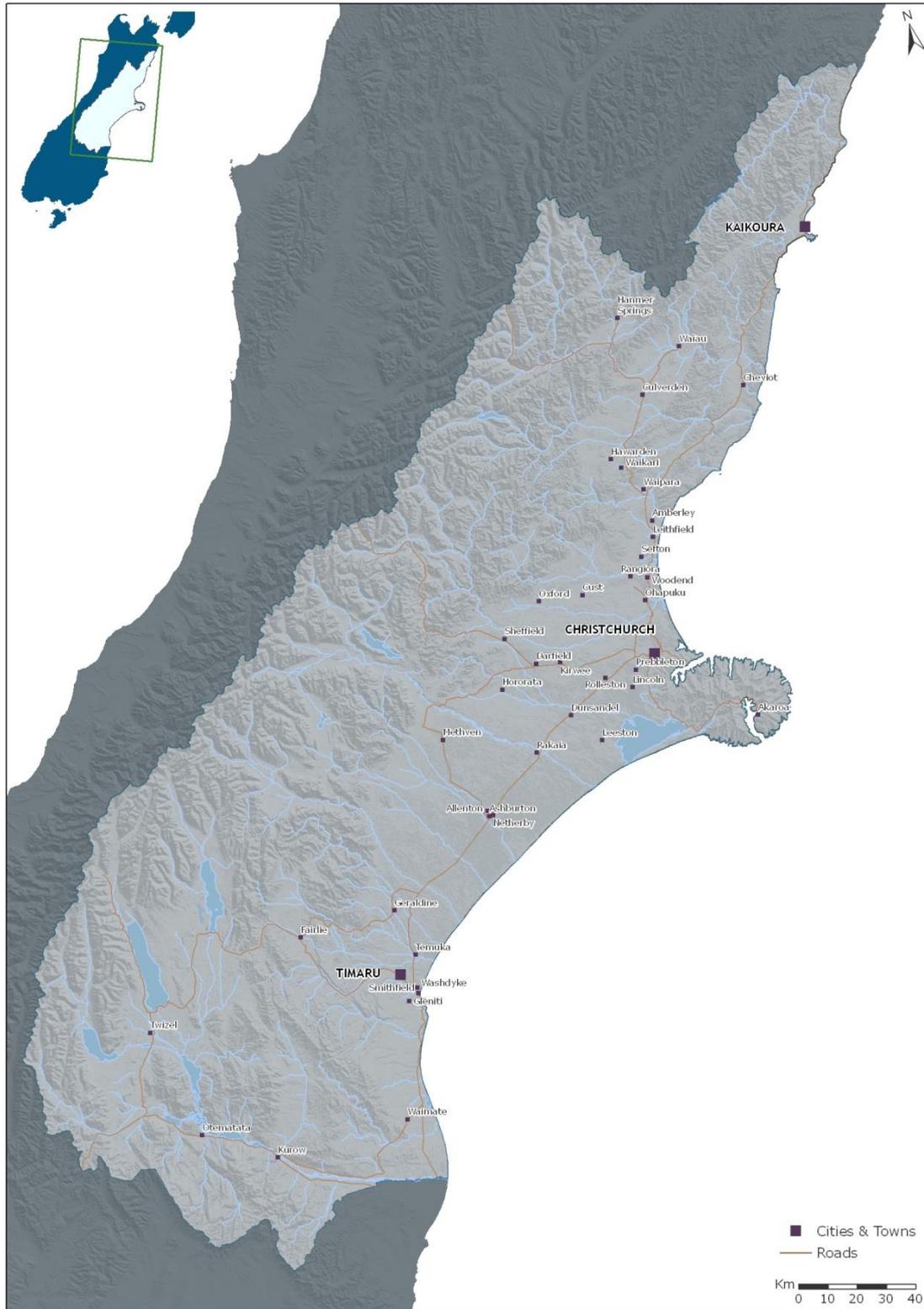
The scheme is limited to one application per person so, for example, a ratepayer owning their own home as well as a rental property would need to choose one property to participate with.

The ratepayer must be up to date with their rates payments and must have for a good history of making rates payment over the last 3 years (there is the ability for first time buyers to apply, but the assessment of such applications is at the discretion of Environment Canterbury).

More information on Healthier Homes Canterbury can be found at www.ecan.govt.nz/healthierhomes

A map of the Canterbury region is shown overleaf.

Figure 1 – Canterbury Map



Part 3: Measures to be installed

Healthier Homes Canterbury provides a funding mechanism for the installation of a range of heating, insulation and ventilation products as well as the cost of obtaining building consent and/or fireplace removal where this is handled by the Registered Supplier.

This Manual relates **only to heating installations** which comprise heat pumps, wood burners, flued gas heaters and pellet fires. All solid fuel burners must be on Environment Canterbury's list of authorised burners and be legally able to be installed in a participant's home. All heat pumps and flued gas fires must be on EECA's list of accepted products.

The quality, performance and effectiveness of heater installations are determined by the workmanship of installers as well as the products installed. In terms of the latter, Environment Canterbury requires Registered Suppliers to use only products accepted by Environment Canterbury for use under the scheme.

3.1 Accepted heating appliances for Healthier Homes Canterbury

Registered Suppliers are to install heating appliances for use under the Healthier Homes Canterbury Scheme from the lists referenced below.

Occasionally a property may be unable to be correctly sized with a heat pump from the Environment Canterbury accepted list. One-off exemptions from the criteria shown below will be considered for approval by Environment Canterbury if this situation arises and approval must be given prior to installation.

More specific details of heaters than can be installed under Healthier Homes Canterbury are shown below:

- Heat pumps and flued gas heaters – any heat pumps and flued gas heaters must be listed on EECA's list of accepted heating products: <https://www.energywise.govt.nz/funding-and-support/payment-options-for-insulation-and-heating/list-of-accepted-heating-products/>
- Solid fuel burners – any low emission woodburners, ultra-low emissions woodburners and pellet fires must be listed on Environment Canterbury's list of authorised solid fuel burners <https://www.ecan.govt.nz/data/authorised-burners/> and legally able to be installed into a particular home as defined in Environment Canterbury's Canterbury Air Regional Plan: <https://www.ecan.govt.nz/your-region/plans-strategies-and-bylaws/canterbury-air-regional-plan/>

KEY MESSAGES: Under the scheme, Registered Suppliers can offer and install a wide range of heating appliances specified in Environment Canterbury's list of accepted products.

Any exceptions to products on the Environment Canterbury accepted list must be approved by Environment Canterbury prior to their installation.

Part 4: Installation of clean heating appliances

4.1 General guidelines for the Healthier Homes Canterbury Scheme

The process that homeowners will follow in relation to Healthier Homes Canterbury comprises the following key steps:

- Customer gets Home Performance Assessment carried out on their home (optional, but strongly recommended).
- Customer decides on desired product(s) and gets quote(s) from Registered Supplier(s).
- Customer applies for Healthier Homes Canterbury via Environment Canterbury.
- If application is approved, Environment Canterbury gives the go ahead to the homeowner and the relevant supplier(s) in accordance with clause 4 of the Proposed Contract and issues a purchase order to the Registered Supplier(s).
- Supplier(s) install required product(s).
- Environment Canterbury receives invoice(s) from supplier(s) and pays in accordance with clause 10 of the Proposed Contract.

Environment Canterbury strongly recommends that all participating homeowners have a Home Performance Assessment (HPA) carried out on their homes by a Level 2 qualified Home Performance Advisor.

Among other things, this will determine the required heat output of a new heater and will provide recommendations on particular heating types that are suitable for the style of home and the occupants' lifestyle.

Homeowners will then be able to seek quotes from Registered Suppliers for the supply and installation of the various accepted measures to be installed through this scheme.

Registered Suppliers are to install heaters that are specified in accordance with the recommendations of the HPA assessment, where this has been carried out.

4.2 Sizing and installation of heat pumps

4.2.1 Sizing of heat pumps

Clean heating appliances must be sized correctly for the primary living area in which they are to be installed.

The Registered Supplier will supply and install the correctly sized heating appliance (including removal and disposal of the old burner where required) and 'make good' the living area where necessary.

A plan of the room sizing (and the calculation sheet) must be prepared for the appliance being installed.

Information, including a worksheet, on how to calculate the heat load of a room, for the purpose of heater sizing is available in Chapter 4 of EECA's Good Practice Guide to Heat Pump Installation:

<https://www.energywise.govt.nz/assets/Resources-Energywise/EECA-Heat-Pump-Installation-Guide-2009-final.pdf>

The preferred methods of calculation are 4.5.2 Heater sizer worksheet or 4.5.3 Manual calculation of heat loss and heating requirements for a building. If using method 4.5.2 Registered Suppliers should ensure that the heater size is scaled up to account for any situations where the ceiling height is above 2.4m. For example, where the ceiling height is 3m, multiply the resultant heater size by 3/2.4.

A proprietary heater sizing calculator from a heat pump manufacturer may also be used.

If the area where the replacement heating appliance will be installed has a door that does not close, contractors must include the area through the door in the sizing e.g. archways, lounge with dining room and kitchen open plan.

Heat pumps should be sized using H2 data calculations.

4.2.2 Installation of heat pumps

All work is to be carried out by suitably qualified and trained staff. Prescribed electrical work must be carried out or supervised by a registered electrician and, if required, an Electrical Certificate of Compliance must be issued.

All heat pumps installed under Healthier Homes Canterbury are to be installed using the processes outlined in section 7 of EECA's best practice guide

<https://www.energywise.govt.nz/assets/Resources-Energywise/EECA-Heat-Pump-Installation-Guide-2009-final.pdf>

Conditions of installation include:

- The indoor unit is to be secured to the wall in such a way as to support the weight and maintain the alignment of the unit over the period of its lifetime (to the manufacturer's specification).
- Piping and wiring penetrations shall be weather-proofed and be vermin proofed.
- Piping insulation should follow manufacturer's specifications and recommendations.
- Copper pipework shall be of New Zealand Industry Standard with wall thickness of no less than 0.8 mm.
- The mounting of the outdoor unit shall meet manufacturer's requirements and ensure the outdoor unit cannot be damaged or its performance impaired by moisture, vegetation, or dirt. Consideration of flooding should be taken into account and the elevation sized accordingly.
- Corrosion resistant fixings (e.g. stainless steel) are to be used for the outdoor unit.
- Ensure adequate clearance from driveways, or if not possible, install a barrier to protect the heat pump outdoor unit.
- Pipe and cables must be protected by UV stabilised trunking.
- An approved electrical isolator shall be installed with every unit to isolate the complete electrical power supply to the indoor and outdoor units.
- Power supply to every heat pump unit shall be permanently wired to a suitable 230V, 50Hz switchboard or power supply. The circuit must be adequately capable of maintaining the load required by the heat pump. This is to be determined by a registered electrician at the time of installation. Labelled miniature circuit breakers (MCBs) or appropriate fuse circuit protection are required. Hard-wired fuses are not acceptable.
- An Electrical Compliance Certificate must be issued to the householder by a registered electrician in accordance with Electrical Regulations 1993 and AS/NZS3000 standards and any other applicable regulations and standards.

- Provide the manufacturer or supplier's warranty to the householder.
- Appliances need to comply with any requirement for noise levels as specified by the local authority. The selection and positioning of the heat pump must comply with any noise requirements.

Reference should be made, but not limited, to:

- New Zealand Refrigerant Handling Code of Practice 2007
- Refrigerating Systems AS/NZ 1677.2:1998
- The "Good Practice Guide to Heat Pump Installation" available on the EECA website: <https://www.energywise.govt.nz/assets/Resources-Energywise/EECA-Heat-Pump-Installation-Guide-2009-final.pdf>

4.3 Installation of wood burners and pellet fires

Woodburner installations must be carried out by suitably qualified and trained staff and comply with all New Zealand Building Code and local council requirements.

Registered Suppliers are responsible for obtaining Building Consents from the relevant territorial authority prior to commencing any installation work.

Registered Suppliers are required to ensure that, following the installation, the relevant territorial authority carries out a final inspection and issues a Code of Compliance Certificate to the homeowner.

Wetbacks (disconnection and reconnection)

Every care should be taken with disconnection of wetbacks, particularly with older style hot water cylinders. The following factors that must be taken into consideration:

- Condition of fittings
- Previous plumbing work
- Condition of valves
- Location of hot water cylinder.

Environment Canterbury cannot guarantee or be held responsible where the wetback disconnection (or reconnection) may disturb the hot water cylinder. The contractor must be aware that where there is a high risk of this occurring the homeowner must be informed and advised that reconnection may not be possible. The contractor would need to explain any additional costs to the property owner i.e. replacement hot water cylinder as replacement hot water cylinders are not funded under the scheme and must be paid by the homeowner.

4.4 Installation of flued gas heaters

System design and installation must be undertaken by a registered gasfitter and comply with all New Zealand Building Code, gas safety and local authority regulatory requirements.

Installers must meet all legal, safety and compliance requirements as set out by WorkSafe.

Details of these requirements can be found on the WorkSafe website:

<https://worksafe.govt.nz/topic-and-industry/energy-safety/compliance-guides/>

KEY MESSAGES:

Heat pumps

Heat pumps must be installed in accordance with EECA's *Good Practice Guide to Heat Pump Installation* <https://www.energywise.govt.nz/assets/Resources-Energywise/EECA-Heat-Pump-Installation-Guide-2009-final.pdf>

Contractors should size the area to be heated using H2 data calculations.

Prescribed electrical work must be carried out or supervised by a registered electrician and, if required, an Electrical Certificate of Compliance must be issued.

Wood burners and pellet fires

Wood burner installations are to be carried out by suitably qualified and trained staff.

When installing wood burners the contractor must obtain a Building Consent prior to commencing any work. Following completion, contractors must ensure that a Code of Compliance Certificate is issued for the work.

If it is necessary to replace the hot water cylinder as a result of wetback disconnection and reconnection then the cost must be met by the homeowner. The Registered Supplier must explain this risk, and flag any additional costs with the owner.

Flued gas heaters

Flued gas heater installations are to be carried out by suitably qualified and trained staff and meet all legal, safety and compliance requirements as set out by the Energy Safety Service.

Part 5: Post-installation audits

Registered Suppliers are required to carry out post-installation audits for all homes within five working days of completion of an installation. Post-installation audits must be recorded on the Post-Installation Audit Form (see Appendix A of this manual).

All safety-relevant compliance failures found in the course of conducting a post-installation audit must be remedied immediately. Compliance failures that are not safety-relevant must be remedied within 20 working days.

A Post-Installation Audit Form must identify the person who carried out the audit and must be signed and dated. The Post-Installation Audit Form must be forwarded to Environment Canterbury, who in turn, will forward it to their auditor in the event that the property is selected for an independent audit.

It is acceptable for a Registered Supplier to have post-installation audits carried out by the team leader or foreman of the installation team immediately following the installation. However, Registered Suppliers need to be mindful of the objectivity of persons carrying out audits of their own work. Registered Suppliers therefore need to exercise good judgement in the confidence in relevant staff and need to have in place internal quality and audit systems to monitor self-audits by members of their installation teams.

KEY MESSAGES: Post-installation audits must be carried out by the Registered Supplier within five working days of completion of an installation.

Contractors need to use the *Post-Installation Audit Form* in Appendix A of this manual.

A *Post-Installation Audit Form* must identify the person who carried out the audit and must be signed and dated. The form must be forwarded to Environment Canterbury, who in turn, will forward it to their auditor, in the event that the property is selected for audit.

Part 6: Environment Canterbury audits

6.1 Introduction

The quality of installations of heating appliances is paramount to the success and credibility of the Healthier Homes Canterbury scheme. Poor quality installations can put the health and safety of contractors and occupants at risk, can reduce performance and cause damage to a home.

Registered suppliers are responsible for ensuring that all installations carried out under the scheme meet the requirements set out under their agreement with Environment Canterbury, including this Manual. Contractors are required to have suitable and working quality systems in place to ensure that their staff and subcontractors consistently deliver high quality installations.

Contractors are further responsible for ensuring that Environment Canterbury is invoiced correctly, i.e. invoiced only the agreed prices and only for measures actually installed.

In addition to Registered Suppliers' own quality systems, Environment Canterbury operates an audit regime to ensure that installations under the scheme meet the requirements, including the correct and timely completion of required documentation such as the Post-Installation Audit Forms. The audit regime consists of regular audits, and re-audits or follow-up audits.

6.2 Principles of engagement

In administering the scheme and engaging with Registered Suppliers Environment Canterbury will be:

- **Supportive** – Environment Canterbury will support Registered Suppliers through advice and guidance (while expecting contractors to have in place, and operate, their own quality and training systems);
- **Clear on expectations** – Environment Canterbury will clearly set out the requirements under the scheme that Registered Suppliers are expected to follow (e.g. relating to products, installation and auditing);
- **Consistent** – Environment Canterbury will be consistent with its advice and guidance to Registered Suppliers, as well as with any requests made and actions taken;
- **Open and transparent** – Environment Canterbury will administer the scheme and deal with Registered Suppliers in an open and transparent way.
- **Fair and professional** – Environment Canterbury will treat Registered Suppliers fairly and professionally.

Environment Canterbury will apply similar principles in engaging with other stakeholders under the scheme, including homeowners and auditors.

6.3 Types of audits

6.3.1 Regular audits – new Registered Suppliers

All new Registered Suppliers to the scheme are required to submit their heating installs for audit until they have achieved five audit passes. They are then considered to be full Registered Suppliers.

Regular audits consist of a site visit and a check of the relevant documentation a Registered Supplier is required to complete.

Audits of new Registered Suppliers will be carried out at the cost of Registered Suppliers. External auditor(s) will submit their invoices to Environment Canterbury and the appropriate audit cost will then be invoiced to the relevant Registered Suppliers.

6.3.2 Regular audits – full Registered Suppliers

All Registered Suppliers that have passed their initial audits will have their heating installs subject to a programme of random auditing.

The processes involved in the audit will be the same as those carried out as part of the audits of new Registered Suppliers.

Regular auditing is an integral part of the scheme and is funded by Environment Canterbury as part of the administration of the scheme, i.e. full Registered Suppliers are not charged for regular audits.

The nature of the auditing work for random audits of full Registered Suppliers will be the same as that undertaken for audits of new Registered Suppliers.

6.3.3 Re-audits

If, in the course of conducting a regular audit, Environment Canterbury finds a compliance failure with an installation, Environment Canterbury will carry out a re-audit or request a follow-up Registered Supplier self-audit to prove that the compliance failure has been remedied. Registered Suppliers are to send to the auditor photo/s as proof that all failed installations have been rectified before the 20 working day time frame. The auditor will then update the audit results to reflect the completion and consequence 'pass'.

Safety risk failures have 24 hours to be rectified; Environment Canterbury must be notified of all safety risk failures immediately. All safety risk failures will be re-audited at the Registered Supplier's expense and will need photo proof provided to Environment Canterbury once rectified. All costs associated with re-audits required to follow up on safety-risk failures will be charged directly to contractors at cost.

High risk failures have 24 hours to be rectified. Environment Canterbury must be notified of all high risk failures immediately and photo proof must be provided from Registered Suppliers once the failure has been rectified.

All high risk failures will be re-audited at the Registered Supplier's expense. High-risk compliance failures are defined in Table A: Compliance Failures.

Following notification from a Registered Supplier that a high-risk compliance failure has been remedied, Environment Canterbury will schedule a re-audit. All costs associated with re-audits required to follow-up on high-risk compliance failures will be charged directly to Registered Suppliers at cost.

Failed re-audits are to be rectified within 20 working days of receiving the audit results from the auditor. All re-audits will be charged directly to Registered Suppliers at cost.

Examples of the various categories of compliance failures are provided in Table A.

6.3.4 Specialist audits

Specialist audits are audits that may be conducted or commissioned by Environment Canterbury on an ad-hoc basis. Examples of specialist audits include:

- an audit of a Registered Supplier's records, e.g. Post-Installation Audit Forms;
- a mystery shopper exercise;
- an audit by a manufacturer's representative of the installation of one of its products;
- an audit by a refrigeration expert of a heat pump installation;
- an audit by a registered electrician of a heating appliance installation involving electrical work;

Environment Canterbury may schedule specialist audits on a random basis but a specialist audit can also be triggered by, for example, a complaint about a Registered Supplier. Registered Suppliers may not be invited to be present for specialist audits but will be advised of the findings and given an opportunity to respond to the findings.

Any compliance failures found during a specialist audit must be remedied by the Registered Supplier within the required timeframes, i.e. 24 hours for safety-relevant high-risk compliance failures, 24 hours for high-risk compliance failure and 20 working days for all other compliance failures.

Environment Canterbury will bear the costs for specialist auditing unless a specialist audit finds a high-risk compliance failure, in which case the Registered Supplier will be charged for all costs associated with the specialist audit. If a high-risk compliance failure is found, a re-audit will also be required at the expense of the contractor.

KEY MESSAGES: Regular audits are an integral part of the scheme and funded by Environment Canterbury. New suppliers are to cover the cost of their first five audits. Registered Suppliers will be charged for the costs of all re-audits. High-risk compliance failures are defined in *Table A: Compliance Failures*.

6.4 Environment Canterbury audit process

Environment Canterbury's process of conducting initial audits and regular audits is as follows:

- (i) Environment Canterbury provides the auditor with a list of properties to be audited. The auditor will then make appointments with homeowners for audit visits. The auditor notifies the Registered Supplier of the audit appointments and invites a representative of the contractor to be present for the audits. (Environment Canterbury encourages contractors to be present for the audits but this is not a requirement).
- (ii) To the degree that this is practicable, Environment Canterbury will try to co-ordinate the allocation of audits by town or suburb so as to optimise the audit process. Initial audits of new Registered Suppliers and random audits of fully Registered Suppliers will require the same process to be followed.
- (iii) The auditor audits an installation using the Environment Canterbury Technical Audit Form to record the audit findings and any remedial action required. If present, the Registered Supplier can discuss and sign the audit report.

- (iv) The auditor provides an audit report to Environment Canterbury and the contractor's head office within 10 working days, unless they find a high-risk compliance failure with an installation, in which case the auditor is required to notify Environment Canterbury immediately.
- (v) Environment Canterbury liaises with the contractor to ensure that any remedial action required is completed within the required timeframe.
- (vi) Safety-relevant high-risk compliance failures must be remedied by contractors within 24 hours of notification. If a safety-relevant high-risk compliance failure is not remedied by a contractor within 24 hours, Environment Canterbury may get the compliance failure remedied by a third party at the expense of the contractor, issue a written warning to the contractor, and withhold payment for the installation or a future invoice. Registered Suppliers are required to explain to homeowners the reasons for the urgent remedial work required as a result of safety-relevant high-risk compliance failures.
- (vii) All installations with high-risk compliance failures will be re-audited by Environment Canterbury with the costs of re-auditing charged to the Registered Supplier. Registered Suppliers are required to explain to homeowners at the time the remedial work is undertaken that a re-audit by Environment Canterbury is required and that Environment Canterbury will directly contact the homeowner to make an appointment for the re-audit.
- (viii) Compliance failures other than safety-relevant high-risk compliance failures found in a regular audit must be remedied within 20 working days of being notified by Environment Canterbury. If a compliance failure other than a safety-relevant high-risk compliance failure is not remedied by a contractor within 20 working days, Environment Canterbury may get the compliance failure remedied by a third party at the expense of the contractor, issue a written warning to the contractor, and withhold payment for the installation or a future invoice. Contractors are required to explain to homeowners the reasons for the remedial work required as a result of compliance failures.
- (ix) Contractors must formally respond to Environment Canterbury on all compliance failures found during auditing to confirm they have remedied the failures together with a summary of actions they are taking to mitigate further similar failures.

6.5 Sanctions

Safety-relevant high-risk compliance failures (as defined in Table A: Compliance failures and risk status) must be remedied by Registered Suppliers within 24 hours of notification by Environment Canterbury. All other compliance failures must be remedied within 20 working days.

Registered Suppliers are required to advise Environment Canterbury of the completion of any remedial action taken and the steps put in place to reduce the likelihood of further similar compliance failures occurring. All high-risk compliance failures will be followed up with a re-audit at the expense of the contractor.

The cost of all re-audits will be charged to the Registered Supplier.

If a Registered Supplier fails to remedy a compliance failure within the required timeframe without valid reason, Environment Canterbury has at its disposal a number of sanctions, including:

- written warnings (two written warnings can lead to a termination of the agreement between the Registered Supplier and Environment Canterbury);
- elevating a Registered Supplier's risk status resulting in more regular audits;
- withholding payment on the Registered Supplier's invoices to Environment Canterbury;
- getting compliance failures remedied by a third party at the expense of the contractor.

In applying sanctions, Environment Canterbury will take into account issues such as a Registered Supplier's history in delivering measures under the scheme and the nature and risk of the compliance failures found.

Written warnings will be issued as a result of the following:

- a Registered Supplier is in breach their agreement with Environment Canterbury;
- installations are not to Environment Canterbury's requirements, particularly where the installations endanger human life;
- a post-installation audit is not carried out or not carried out as required;
- failure to remedy a notified compliance failure within the required timeframe;
- the use of products not accepted by Environment Canterbury for use under the scheme;
- work carried out without a required Building Consent;
- a required Electrical Certificate of Compliance not issued;
- an invoice issued incorrectly (e.g. for work not undertaken, for more work than actually undertaken, for product not installed, or work or charged at a price higher than the quoted price);
- a Registered Supplier giving false or misleading information to Environment Canterbury or homeowner.

Environment Canterbury will terminate a Registered Supplier's agreement as a result of the following:

- A Registered Supplier is in serious breach of their agreement with Environment Canterbury;
- There is a history of failure to remedy notified compliance failures within the required timeframe;
- The issuing of two written warnings;
- Fraud, theft or other criminal behaviour by a Registered Supplier that raises doubts about the suitability of the Registered Supplier to provide measures under the scheme; and
- There is a history of high-risk compliance failures which, in Environment Canterbury's opinion, presents a serious risk to public safety.

The above lists are not exhaustive and Environment Canterbury reserves the right to issue written warnings to Registered Suppliers in other instances. Environment Canterbury also reserves the right to terminate a Registered Supplier's agreement in other instances. For

details on the provisions for the early termination of the Contract Agreement please refer to the agreement.

In the event of Environment Canterbury terminating a Registered Supplier's agreement early, Environment Canterbury will pay the Registered Supplier for all work completed prior to termination provided the work meets all applicable requirements under the agreement.

KEY MESSAGES: In cases of compliance failures, Environment Canterbury has at its disposal a range of sanctions including written warnings, withholding payment and terminating Registered Suppliers' agreements.

In applying sanctions, Environment Canterbury will take into account issues such as a Registered Supplier's history in delivering measures under the scheme and the nature and risk of the compliance failures found.

6.6 Compliance failures and risk status

For the purpose of assessing and quantifying contractors' performance under the scheme, Environment Canterbury has developed a list of compliance failures – refer to Table A: Compliance failures on the following page. For each compliance failure the table sets out the associated risk (low, medium, high) and number of demerit points. Compliance failures include technical failures as well as administrative failures.

There are four types of compliance failures set out in the table:

- (i) Safety-relevant high-risk compliance failures;
- (ii) High-risk compliance failures (other than safety-relevant high-risk compliance failures);
- (iii) Medium-risk compliance failures; and
- (iv) Low-risk compliance failures.

Under the scheme, each Registered Supplier is assigned a "risk status" (low, medium, high) based on their performance history under the scheme. A Registered Supplier's risk status determines the amount of scrutiny the Registered Supplier will receive, e.g. in terms of regular auditing, and will be used to determine the level of any sanctions Environment Canterbury may impose in cases of compliance failures. The risk status of all new Registered Suppliers' is set to "high" by default.

Each audit (regular audit, re-audit or specialist audit) conducted in respect of a Registered Supplier's installation is scored on the basis of the number and risk of any compliance failures found. High-risk compliance failures attract a higher number of demerit points than low risk failures.

All safety-relevant high-risk compliance failures attract a score of 100 demerit points. Other high-risk compliance failures score 80 demerit points. Medium and low-risk compliance failures attract scores ranging from 20 to 40 demerit points. A score of zero means that no compliance failures were found.

The total number of demerit points for an installation is the sum of the individual demerit points of all compliance failures found. Compliance failures and their corresponding risks and demerit points are set out in Table A: Compliance failures.

Table A Compliance failures

Compliance failure	Risk	Points
1 Unsafe electrical wiring or gas plumbing.	High (safety-relevant)	100
2 Other safety-relevant compliance failure, e.g. an unsecured wall-mounted outdoor heat pump unit or insufficient clearances around a heating appliance.	High (safety-relevant)	100
3 Notified safety-relevant high-risk compliance failure not remedied within 24 hours.	High (safety-relevant)	100
4 Post-installation audit not carried out within 5 working days of completion of installation.	High	80
5 Electrical Certificate of Compliance not issued for prescribed electrical work.	High	80
6 Gas certificate not issued, where required.	High	80
7 Work carried out without required Building Consent.	High	80
8 The overall quality of an installation is so poor that it undermines the purpose, performance or durability of the installation.	High	80
9 Notified high-risk compliance failure (other than a safety-relevant high-risk compliance failure) not remedied within 24 hours.	High	80
10 Post-installation audit does not meet the requirements set out in this Manual.	Medium	40
11 Notified compliance failure (other than a high-risk compliance failure) not remedied within 20 working days.	Medium	40
12 Heater not sized correctly for area to be heated.	Medium	40
13 Product not on list of accepted heating products	Medium	40
14 Debris not removed.	Low	20

A Registered Supplier's risk status is determined by the Registered Supplier's average audit score.

Table B: Average audit score and risk status below sets out how a contractor's average audit score translates into the contractor's risk status.

Table B Average audit score and risk status

Average audit score of last 5 installations	Risk status
76+	High
40 - 75	Medium
0 - 39	Low

Appendices

Appendix A: Post-installation Audit Form

Registered Supplier and auditor details	
Name of Registered Supplier	
Date of installation	
Name(s) of heating appliance installer	
Name of person conducting audit	
Date of post-installation audit	
Homeowner details	
Name (legal property owner)	
Tenure	<input type="checkbox"/> Owner-occupier <input type="checkbox"/> Rental
Physical address of property	
Phone number (homeowner)	
Phone number (tenant)	
Heating – type of heating installed:	
Ultra-low emission burner <input type="checkbox"/>	Low emission burner <input type="checkbox"/>
Pellet fire <input type="checkbox"/>	Flued gas heater <input type="checkbox"/>
Heat pump <input type="checkbox"/>	
Heater make and model:	
Photos attached of replacement heating <input type="checkbox"/> Yes <input type="checkbox"/> No	
What is the output capacity of the heating appliance?	kW
In the case of a heat pump , was the installation carried out in accordance with EECA's Good Practice Guide to Heat Pump Installation?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Did the heater installation require Prescribed Electrical Work?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If "Yes": Was the work carried out or supervised by a registered electrician?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Has an Electrical Certificate of Compliance been issued?	<input type="checkbox"/> Yes <input type="checkbox"/> No
In the case of a wood or pellet heater , was the installation carried by a suitably qualified technician?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Has a Building Consent been obtained for the work?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a
Have you arranged for the final inspection by the council and the issuing of the Code Compliance Certificate?	<input type="checkbox"/> Yes <input type="checkbox"/> No
In the case of a gas heater, was the installation carried out by a Registered Gasfitter?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Have you attached a copy of the certification to this form e.g. Code of Compliance, Electrical Certificate, gas certificate?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments:	

I have audited the above installation. The work meets all compliance related matters.

Name: _____ **Signed:** _____

Date: _____

Appendix B: Environment Canterbury – Healthier Homes Canterbury Technical Audit Form

Audit Report for:	Healthier Homes Canterbury Heater Installations		
Audit Date:			
Registered Supplier:			
Homeowner Name:			
Property Address:			
Heater Type:	Ultra-low emission burner <input type="checkbox"/>	Low emission burner <input type="checkbox"/>	
	Pellet fire <input type="checkbox"/>	Flued gas heater <input type="checkbox"/>	
	Heat pump <input type="checkbox"/>		
Heater Make/Model:			
On Accepted list:	Yes <input type="checkbox"/> No <input type="checkbox"/>		
Specifications			
Heater sized correctly for space it has been installed into:	Yes <input type="checkbox"/> No <input type="checkbox"/>		
Type of Audit:	Regular audit - New supplier <input type="checkbox"/>	Regular audit – fully Registered Supplier <input type="checkbox"/>	
	Re-audit <input type="checkbox"/>	Specialist audit <input type="checkbox"/>	
Re-audit required:	Yes <input type="checkbox"/> No <input type="checkbox"/>		
Comments on installation:	<ul style="list-style-type: none"> • • 		
Compliance failures:	<ul style="list-style-type: none"> • • 		
Accrued Demerit points:	Service Provider Risk Status:		
Auditor's comments:	<ul style="list-style-type: none"> • • 		
Auditor's Signature:	Date:		
Auditor's Details:			

Attach Photos