Advanced Energy Solutions
Your local heating and cooling experts.



# Healthy Homes Report - Advanced Energy Solutions

## Overview

| | |
|---|---|
| Photo of external |  |
| Assessor: | Brett Dudley |
| Client: | Susanna c/o Bronwyn Scott-Woods |
| Property Address: | 10a Victory Road, Laingholm |
| Cladding: | Concrete Block |
| Date: | 27/06/2024 |

## Overall results

| | |
|---|---|
| Ceiling Insulation Standard | EXEMPT |
| Underfloor Insulation Standard | EXEMPT |
| Heating Standard | FAIL |
| Ventilation Standard | FAIL |
| Draught Stopping Standard | PASS |
| Moisture Ingress and Drainage Standard | PASS |
| Moisture Ingress and Drainage Standard - Ground Moisture Barrier | EXEMPT |
| Smoke Detectors | FAIL |

## Ceiling Insulation

| | |
|---|---|
| Results | EXEMPT |
| Is it possible to install ceiling insulation at this property? | No |
| Notes | Bottom story property with no ceiling cavity. |

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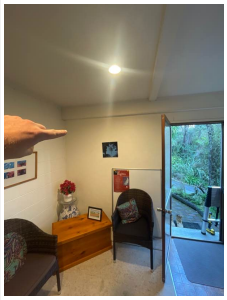
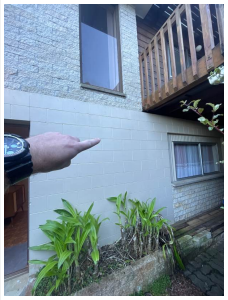
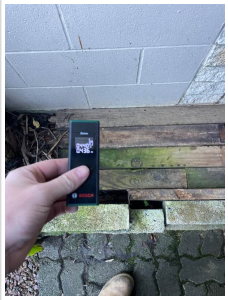
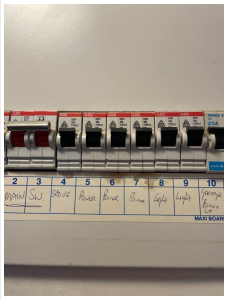
| | |
|---|---|
| Photos |  |

## Breakdown of Underfloor Insulation Results

| | |
|---|---|
| Results | EXEMPT |
| Is it possible to install underfloor insulation at this property? | No |
| Notes | Concrete based property with no underfloor cavity. |
| Photos |    |

## Breakdown of heating results

| | |
|---|---|
| Result | FAIL |
| Heating tool link: | https://tools.tenancy.govt.nz/heating-tool/result/23ep7wzkn91j8e1qpjl5lxyd0gmr4oqv |
| Required heating capacity: | 3.70kW |
| What type of heating device is present? | None |
| Heating capacity of qualified heating devices: | 0.00kW |
| Do the current eligible heater/s qualify and meet the heating tool output or up to 80%? | N/A |
| Photos |     |

## Breakdown of kitchen ventilation results

| | |
|---|---|
| Results | FAIL |

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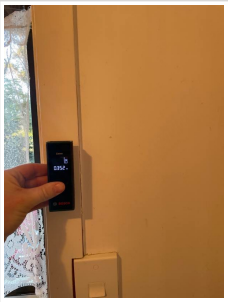
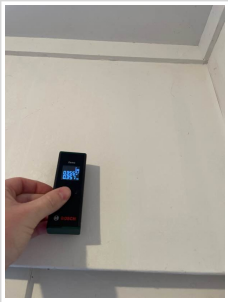
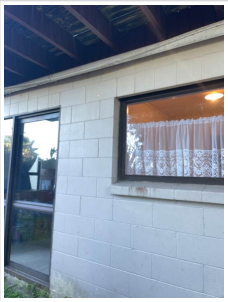
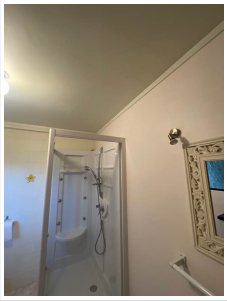
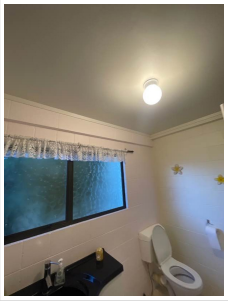
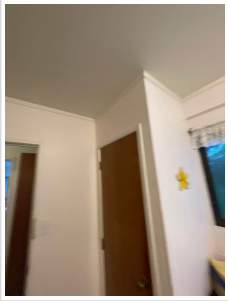
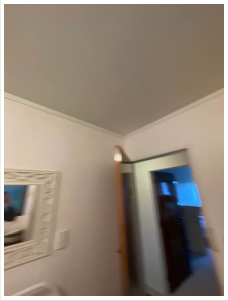
| | |
|---|---|
| How many kitchens are in the property? | 1 |
| Is there an extraction device in the kitchen? | No |
| Photos |     |

## Breakdown of bathroom ventilation results

| | |
|---|---|
| Results | FAIL |
| How many bathrooms are in the property? | 1 |
| Are extraction device/s present in all bathrooms? | No |
| Photos |     |
| |  |

## Breakdown of openable windows and doors results

| | |
|---|---|
| Do all rooms have either an external window or door allowing a minimum of 5% openability? | PASS |

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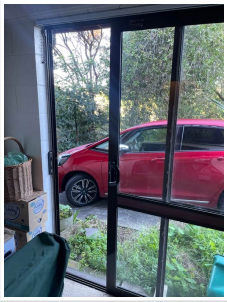
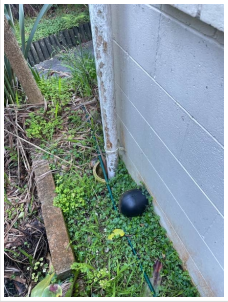
| | |
|---|---|
| Photos |     |

## Breakdown of draught stopping results

| | |
|---|---|
| Results | PASS |
| Does the property have an open fireplace? | No |
| Are there and gaps or holes with a width greater than 3mm in or around the walls, ceilings, windows, doors and floors? | No |

## Breakdown of moisture ingress and drainage results

| | |
|---|---|
| Result | PASS |
| Does the property have efficient drainage for the removal of storm water, surface water and ground water, including an appropriate outfall? | Yes |
| Is the guttering and drainage system in good condition with no visual damage or debris present? | Yes |
| Is around the house free from pooling water? | Yes |
| Photos |     |

## Breakdown of ground moisture barrier results

| | |
|---|---|
| Result | EXEMPT |
| Can a Moisture Barrier be installed on this property? | No |
| Notes | Concrete based property with no underfloor cavity. |

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| | |
|---|---|
| Photos |    |

## Smoke alarm placement assessment

| | |
|---|---|
| Does the property require a smoke alarm assessment? | Yes |
| Are smoke alarms present on every storey/level and within 3 meters of every bedroom? | No |
| How many smoke alarms are present? | 0 |
| How many new smoke alarms are required? | 1 |
| Photos (Proposed smoke alarms location) |  |

## Current level of compliance

| | |
|---|---|
| HEALTHY HOMES STANDARDS STATEMENT - RESIDENTIAL TENANCIES | SECTION 13A STATEMENT - This form meets the requirements for the landlord to provide a written signed statement containing certain information as required under sections 13A(1A), 13A(1C) and 13A(1CA) or 13A(1CB) of the Act. |
| Landlords must attach a healthy homes statement from 1 July 2019. | (Strike one option out)<br><br>I/we, _____ (name of the landlord(s)) will comply with the healthy homes standards as required by section 45(1)(bb) of the Residential Tenancies Act.<br><br>I/we, _____ (name of the landlord(s)) already comply with the healthy homes standards as required by section 45(1)(bb) of the Residential Tenancies Act. |
| Landlord statement: | I/we, _____ (name of landlord(s)) declare that the information contained in this statement is true and correct as at the date of signing.<br><br>X_____<br>Signed by and date |

## About the healthy homes standards

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| | |
|---|---|
| **Healthy homes** | The healthy homes standards introduce specific and minimum standards for heating, insulation, ventilation, moisture ingress and drainage, and draught stopping in rental properties.<br><br>All private rentals must comply within 90 days of any new or renewed tenancy after 1 July 2021, with all private rentals complying by 1 July 2024. All boarding houses must comply by 1 July 2021. All houses rented by Kainga Ora (formerly Housing New Zealand) and registered Community Housing Providers must comply by 1 July 2023. |
| **Insulation** | Insulation requirements are measured by R-value. R-value is a measure of resistance to heat flow. The higher the R-value, the better the insulation.<br><br>Minimum R-values vary across New Zealand.<br><br>Zone 1 — ceiling R 2.9, underfloor R 1.3<br>Zone 2 — ceiling R 2.9, underfloor R 1.3<br>Zone 3 — ceiling R 3.3, underfloor R 1.3<br><br>Existing ceiling insulation that was installed before 1 July 2016 must be at least 120mm thick.<br><br>Ceiling insulation that is less than 120mm thick is acceptable if the landlord can prove:<br><br>the insulation's R-value met the minimum R-values (2.9 or 3.3 depending on the climate zone) when it was installed, and<br>the insulation's thickness has not degraded by more than 30% (compared to when it was installed). Insulation must be installed in accordance with New Zealand Standard 4246:2016.<br><br>All existing insulation must still be in reasonable condition to meet the requirements. This means there should be no mould, dampness, damage or gaps. |
| **Heating** | There must be one or more fixed heaters that can directly heat the main living room.<br><br>The main living room is the largest room that is used for general, everyday living – for example a lounge, family room or dining room.<br><br>Heater(s) must be fixed (not portable), and must be at least 1.5 kW in heating capacity and meet the minimum heating capacity needed for the main living room. This capacity can be calculated using the Heating Assessment Tool or the formula outlined in the regulations.<br><br>Heater(s) must not be an open fire or an unflued combustion heater, e.g. portable LPG bottle heaters. If you use a heat pump or an electric heater as part of your solution to meet the healthy homes heating standard, it must have a thermostat. You can't use an electric heater (except a heat pump) if the required heating capacity for the main living room is over 2.4 kW, unless you're 'topping up' existing qualifying heating that was installed before 1 July 2019. |
| **Ventilation** | All habitable rooms in a rental property must have at least one window, door or skylight which opens to the outside and can be fixed in the open position.<br><br>In each room, the size of the openable windows, doors and skylights together must be at least 5% of the floor area of that room.<br><br>Each window door, window or skylight must be openable and must be able to remain fixed in an open position.<br><br>All kitchens and bathrooms must have an extractor fan vented to the outside.<br><br>Kitchens – In any room with a cooktop, new fans or rangehoods installed after 1 July 2019 must have a minimum diameter (including ducting) of 150mm or an exhaust capacity of at least 50 litres per second.<br>Bathrooms – In any room with a shower or bath, new fans installed after 1 July 2019 must have a minimum diameter (including ducting) of 120mm or an exhaust capacity of at least 25 litres per second. |

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| | |
|---|---|
| **Draught stopping** | Landlords must already provide rental properties in a reasonable state of repair.<br><br>Under the healthy homes standards, landlords must make sure the premises doesn't have unreasonable gaps or holes in walls, ceilings, windows, skylights, floors and doors which cause noticeable draughts. Landlords can't use the age and condition of the house as a reason not to stop gaps or holes.<br><br>If rental homes have an open fireplace, it must be closed off or the chimney blocked to prevent draughts in and out of the property through the fireplace.<br><br>Tenants can ask landlords in writing to make the fireplace available for use and the landlord can agree. If it is available for use, it must be in good working order and free of any gaps which could cause a draught that are not necessary for the safe and efficient operation of the open fireplace. It is best practice to record any agreement in writing, with both tenant and landlord keeping a copy. |
| **Moisture ingress and drainage** | Rental properties must have efficient drainage for the removal of storm water, surface water and ground water, including an appropriate outfall. The drainage system must include gutters, downpipes and drains for the removal of water from the roof.<br><br>If the rental property has an enclosed subfloor, a ground moisture barrier must be installed if it is reasonably practicable to do so. |

## Term & Conditions

| | |
|---|---|
| **Terms and conditions** | Terms & Conditions / The report is based on our inspection on the day of the assessment. The basis of the inspection only counts on the parts or the property that is accessible required per the HHS. Areas that are not accessible will not be entered on the report and recorded what wasn't inspected. Any works or changes to the areas covered on the report will affect the report. Based on the results of the report quotes will be provided for all the work required for compliance which Advanced Energy Solutions LTD can undertake. For all other works that Advanced Energy Solutions LTD cannot carry out suggestions on the report are only recommendations and is up to the contractor carrying out the works to ensure this will be compliant and signed off. Advanced Energy Solutions LTD does not accept responsibility or liability for damage caused or attributable to the nature and condition of the construction of the property. |

# QUOTE

Bronwyn Scott-Woods

**Date**
1 Jul 2024

**Expiry**
31 Jul 2024

**Quote Number**
QU-1664

**Reference**
HH compliance quote 10A Victory Road Langholm.

**GST Number**
87-053-709

Advanced Energy Solutions Ltd
28 Welsh Hills Road
Swanson
Auckland 0614
www.advancedenergy.nz

## 10A Victory Road Langholm - Healthy Homes Compliance

HH report issues detected:
Heating
Kitchen ventilation
Bathroom Ventilation
Smoke detector.

| Description | Quantity | Unit Price | Amount NZD |
|---|---|---|---|
| The property requires an approved heating source of no less than 3.7 KW of heating. We offer the following solution.<br><br>Fern 035 - We offer to supply and install a new Carrier Fern Model 53QHG035 with 3.75 kW heating and 3.5 kW cooling output on a back-to-back or back-to-side install using existing local power circuit. This includes up to 3 metres of pipework and up to 10 metres of electrical wiring. This is our best value quality unit that meets and exceeds the requirements for heating of this residence.<br><br>This unit is fitted by an experienced Carrier installer and comes with a 7-year warranty. | 1.00 | 1,875.00 | 1,875.00 |
| The brand new Allure line from Carrier come with all the features of the Fern line, but every unit comes with a new sleek remote, in-built wifi for easier access to control your unit, and UV bulbs on the indoor coil - to keep the germs, mold and mildew from recirculating throughout your house.<br><br>We currently offer an upgrade to the latest new Allure model from the older Fern model at no additional cost, this free upgrade represents a saving to the customer of over $100 to obtain all the benefits as above that this new unit offers. | 1.00 | 0.00 | 0.00 |
| Allowance has been made for a concrete drill penetration to complete the heat pump installation. This is not charged if not required.<br><br>Block wall 70 mm penetration. | 1.00 | 125.00 | 125.00 |
| Allowance has been made for an additional metre of pipework to be used. This is not charged if not required and is only charged for lengths above 3 metres. | 1.00 | 55.00 | 55.00 |
| Kitchen Ventilation:<br><br>There is no mechanical ventilation in the kitchen as required. There is no wall area to fit a range hood due the position of the windows in relation to the stove. To overcome this, we offer the following solution.<br>We offer to supply and install a new Manrose extraction fan this is a 150 mm fan in the ceiling area and this will be fitted with a separate and new switch wired in and ducted to the external | 1.00 | 625.00 | 625.00 |

| Description | Quantity | Unit Price | Amount NZD |
|---|---|---|---|
| soffit with grill. and new ducting and a soffit hole cut with the grill fitted. Please note we will attempt to connect the switch using the internal wall cavity but if required some capping may be visible to conceal the wiring, this is only ever kept our processional tradesmen electrician and if we able to avoid this for visual effect we will | | | |
| Allowance has been made for a concrete drill block wall ( 200 mm thick ) specialist cutting and drilling for the 160 mm hole. | 1.00 | 199.00 | 199.00 |
| Bathroom ventilation:<br><br>There is no mechanical ventilation as required in the area. This being a bottom floor creates a situation where it is difficult to install a ceiling fan as there is no mid floor cavity to run the ducting.<br>As a result, we offer to supply and install a new thru wall 150 mm Manrose or Vynco fan this is ducted to the external enviros with a new vent cover fitted externally and this is fitted by an experienced electrician.<br>This fan will be connected to the nearest light circuit and be turned on and off with the light switch.<br>Please note we will always try and minimize capping if required to be used to connect the fan to the power source, but this is sometimes required in installation of this nature. We will always avoid this if possible and if required this will always be kept to a minimum and is neatly done | 1.00 | 495.00 | 495.00 |
| Allowance has been made for a concrete drill block wall ( 200 mm thick ) specialist cutting and drilling for the 160 mm hole. | 1.00 | 199.00 | 199.00 |
| Smoke Detector:<br>The property requires a long life battery smoke detector to be fitted for compliance.<br>We offer to supply and install a new long life battery ( 10 years ) photoelectric type smoke detector installed in accordance with the RTA. | 1.00 | 50.00 | 50.00 |
| A certificate of compliance will be generated by a registered electrician upon any electrical installation that needs one to be generated. | 1.00 | 0.00 | 0.00 |
| | | Subtotal | 3,623.00 |
| | | TOTAL GST 15% | 543.45 |
| | | **TOTAL NZD** | **4,166.45** |

**Terms**

Terms and Conditions: By accepting this quote the parties agrees they are authorized to accept the scope of work proposed in this quote and agree to our terms and conditions. All products remain the property of Advanced Energy Solutions Ltd until paid for in full. Accounts are due in full in 7 days from instillation unless arranged prior in writing. Any costs incurred to collect overdue accounts are the full responsibility and cost of the customer and any overdue accounts will also incur a 2.5 % per month additional service fee. This quote is subject to the conditions named above. Where applicable a Certificate of compliance will be issued on all jobs once full payment received.

All payments to:
Advanced Energy Solutions Limited BNZ – 02-0223-0009053-000
Please use the quote number as a reference on any deposits.

sales@advancedenergy.nz

Tenancy Services

# Heating report

## Report Details

This report was generated by
**Brett Dudley**

Address of rental property
**10A Victory Road**

Name of landlord
**Ray White Aus star**

Report was generated on
**01 July 2024 05:55pm**

Landlords should keep this report as a record of compliance. This will help prove a rental home meets the heating requirements of the healthy homes standards.

## How to provide this heating requirement

### You need 3.7kW of heating capacity to heat your living room

This is the minimum required heating capacity you need to provide in the main living room to meet the healthy homes standards, based on the information you supplied. It takes into account your local climate and the design and construction of your home. The tool makes some assumptions to keep things simple.

### Your heating needs to provide this heating capacity with an outdoor temperature of 1°C

Heat pump installers need to know the outdoor temperature to work to. This is because the heating capacity of a heat pump reduces with colder outdoor temperatures. If you live somewhere cold, you may need a particular model of heat pump to give enough heating capacity.

## Choose the right type and size of heater

You can provide this heating capacity using one or more heaters. But each heater must meet the requirements in the healthy homes standards.

Your heater(s) must be fixed and not portable. They must each be at least 1.5 kW in heating capacity.

Your heater must not be an open fire or an unflued combustion heater, eg portable LPG bottle heater. If you use a heat pump or an electric heater, it must have a thermostat. You cannot use an electric heater for a required heating capacity over 2.4 kW unless you're 'topping up' existing heating. Smaller 'top up' heaters must meet certain conditions (see below).

The healthy homes standards treat heat pumps differently from other electric heaters. Where the tool refers to an 'electric heater', this means an electric heater that is not a heat pump.

In most cases, the right type of heater will be a larger fixed heating device like a heat pump, wood burner, pellet burner or flued gas heater. In some cases, eg small apartments or some modern, well-insulated homes, a smaller fixed electric heater will be enough. Properties (mainly in Rotorua) which use direct geothermal heating to heat the main living room, that do not have a stated heating capacity also satisfy the heating standard. For more information about different heating options visit the Gen Less website.

You can still use heaters that don't meet these requirements. They won't need to be removed but they can't contribute to the heating capacity you need to meet the healthy homes standards.

## Top up existing heating

If you're adding a new heater to a room with existing heating, each heater must meet the requirements in the healthy homes standards, with one exception. If your existing heating doesn't have the required heating capacity, you can add a smaller fixed electric heater to 'top up' your heating. If you do, you must meet all these conditions:

- you installed your existing heating before 1 July 2019
- each of your existing heaters meets the general requirements for heaters (listed above) and is not an electric heater (except for a heat pump)
- the required heating capacity is more than 2.4 kW, and
- the 'top up' you need is 2.4 kW or less.

For example, if you have a heat pump with a heating capacity of 3.6 kW that was installed before 1 July, 2019, but you need a total heating capacity of 6.0 kW, you can add a fixed 2.4 kW electric heater with a thermostat to meet the standard.

Once the heat pump needs to be replaced due to wear and tear, you will need to install a qualifying heater/s that meets the full capacity requirement of the healthy homes heating standard. See further examples below.

You don't need to add more heating if you have one or more existing large heaters that meet all these conditions:

- were installed before 1 July 2019
- each have a heating capacity greater than 2.4 kW
- meet the requirements in the standards, and
- have a total heating capacity that's at least 80% of what you need.

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## Disclaimer

This tool is a 'heating capacity calculator' for the purposes of the Residential Tenancies (Healthy Homes Standards) Regulations 2019. As well as determining the required heating capacity, the Heating Assessment Tool will also provide information about the type of heating device that, if installed, would achieve compliance with the heating standard.

When the Heating Assessment Tool is used correctly it is intended to presume the required heating capacity for the main living room of a specific rental premises. Any person using it in good faith is entitled to rely on the report produced as being the correct result based on the information entered. Misuse of the Heating Assessment Tool may cause an incorrect result and impact on a landlord's compliance with the heating standard. Read the full disclaimer.

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## Examples

Here are some examples showing a required heating capacity and how you could provide heating that meets the healthy homes standards.

Example 1:

You need a total heating capacity of 6.0 kW. You have an existing heat pump, installed in 2018, with a heating capacity of 3.6 kW. You can add a fixed 2.4 kW electric heater with a thermostat to meet the standard.

Once the heater needs to be replaced due to wear and tear, you will need to install one or more acceptable heating devices that meet the full capacity requirement (6.0Kw).

Example 2:

You need a total heating capacity of 8 kW. You have a fixed heat pump with a heating capacity of 4 kW and an unflued gas heater with a heating capacity of 3 kW. The unflued gas heater is an unacceptable heater type, which means it can't contribute to the required heating capacity. You can meet the standards by installing a 4 kW (or larger) qualifying fixed heater where it can heat the main living room directly. You cannot add an electric heater to 'top up' your heating because the 'top up' you need is over 2.4 kW.

Example 3:

You need a total heating capacity of 3.5 kW. You have a fixed heat pump with a thermostat and heating capacity of 2.8 kW, installed in 2014. You don't need to add any more heating because your existing heating is a qualifying, larger heater that achieves at least 80% of the required heating capacity.

# Rental property details

## About your home

### Your home's age, location and type

Is your home a qualifying apartment: **No**
When was your home built or consented: **From 1978 to 2000**
Region: **Auckland**
Council: **Auckland Council**
Zone: **1**
Assumed external temperature: **1°C**
Home been upgraded to 2009 insulation and glazing standards: **No**

## About your main living room

### Main living room

Main living room area: **19m²**

## Level 1

### Wall 1

Type of wall: **internal**
Length: **2.50m**
Height: **2.40m**
Area: **6.00m²**
Calculated area: **6.00m²**
R-Value: **0.4**
Default R-Value **0.4**
Wall Transmission Heat Loss: **0.13kW**
Number of windows: **0**
Number of door glazing: **0**

### Wall 2

Type of wall: **internal**
Length: **2.30m**
Height: **2.40m**
Area: **5.52m²**
Calculated area: **5.52m²**
R-Value: **0.4**
Default R-Value **0.4**
Wall Transmission Heat Loss: **0.12kW**
Number of windows: **0**
Number of door glazing: **0**

## Wall 3

Type of wall: **external**
Length: **2.55m**
Height: **2.40m**
Area: **6.12m²**
Calculated area: **6.12m²**
R-Value: **1**
Default R-Value **1**
Wall Transmission Heat Loss: **0.24kW**
Number of windows: **1**
Number of door glazing: **0**

## Wall 3: Window 1

Glazing type: **single**
Length: **1.75m**
Height: **0.80m**
Area: **1.40m²**
Calculated area: **1.40m²**
R-Value: **0.15**
Default R-Value **0.15**

## Wall 4

Type of wall: **internal**
Length: **2.30m**
Height: **2.40m**
Area: **5.52m²**
Calculated area: **5.52m²**
R-Value: **0.4**
Default R-Value **0.4**
Wall Transmission Heat Loss: **0.12kW**
Number of windows: **0**
Number of door glazing: **0**

## Wall 5

Type of wall: **internal**
Length: **0.75m**
Height: **2.40m**
Area: **1.80m²**
Calculated area: **1.80m²**
R-Value: **0.4**
Default R-Value **0.4**
Wall Transmission Heat Loss: **0.04kW**
Number of windows: **0**
Number of door glazing: **0**

## Wall 6

Type of wall: **internal**
Length: **2.25m**
Height: **2.40m**
Area: **5.40m²**
Calculated area: **5.40m²**
R-Value: **0.4**
Default R-Value **0.4**
Wall Transmission Heat Loss: **0.11kW**
Number of windows: **0**
Number of door glazing: **0**

## Wall 7

Type of wall: **internal**
Length: **3.00m**
Height: **2.40m**
Area: **7.20m²**
Calculated area: **7.20m²**
R-Value: **0.4**
Default R-Value **0.4**
Wall Transmission Heat Loss: **0.15kW**
Number of windows: **0**
Number of door glazing: **0**

## Wall 8

Type of wall: **internal**
Length: **0.90m**
Height: **2.40m**
Area: **2.16m²**
Calculated area: **2.16m²**
R-Value: **0.4**
Default R-Value **0.4**
Wall Transmission Heat Loss: **0.05kW**
Number of windows: **0**
Number of door glazing: **0**

## Wall 9

Type of wall: **internal**
Length: **6.30m**
Height: **2.40m**
Area: **15.12m²**
Calculated area: **15.12m²**
R-Value: **0.4**
Default R-Value **0.4**
Wall Transmission Heat Loss: **0.32kW**
Number of windows: **0**
Number of door glazing: **0**

## Wall 10

Type of wall: **external**
Length: **3.20m**
Height: **2.40m**
Area: **7.68m²**
Calculated area: **7.68m²**
R-Value: **1**
Default R-Value **1**
Wall Transmission Heat Loss: **0.35kW**
Number of windows: **0**
Number of door glazing: **1**

## Wall 10: Door 1 glazing

Glazing type: **single**
Length: **1.15m**
Height: **1.95m**
Area: **2m²**
Calculated area: **2m²**
R-Value **0.15**
Default R-Value **0.15**

## Floor:

Floor Area: **19.00m²**
Space below floor: **external**
External percentage: **100%**
External R-Value **0.5**
External R-Value default **1.3**
Standards compliance: **none**
Standards percentage: **0%**
Standards area: **0.00m²**
Standards R-Value **0**
Standards R-Value default **1.3**
Non-standards percentage: **100%**
Non-standards area: **19.00m²**
Non-standards R-Value **0.5**
Non-standards R-Value default **0.5**

Internal percentage: **0%**
Internal R-Value **0**
Internal R-Value default **0.5**
Total area: **19.00m²**
Internal area: **0.00m²**
External area: **19.00m²**
Internal Transmission Heat Loss: **0.00kW**
External Transmission Heat Loss: **0.65kW**
Standards Transmission Heat Loss: **0.00kW**
Non-standards Transmission Heat Loss: **0.65kW**
Total Transmission Heat Loss: **0.65kW**

### Ceiling:

Floor Area: **19.00m²**
Shape of ceiling: **flat**
Space above ceiling: **internal**
Standards percentage: **0%**
Standards area: **0.00m²**
Standards R-Value **0**
Standards R-Value default **2.4**
Non-standards percentage: **0%**
Non-standards area: **0.00m²**
Non-standards R-Value: **0**
Non-standards R-Value default: **1.9**
Internal percentage: **100%**
Internal R-Value: **0.5**
Internal R-Value default: **0.5**
External percentage: **0%**
External R-Value: **0**
External R-Value default: **2.4**

Flat area: **19.00m²**
Irregular area: **0.00m²**
Total area: **19.00m²**
Internal area: **19.00m²**
External area: **0.00m²**
Internal Transmission Heat Loss: **0.32kW**
External Transmission Heat Loss: **0.00kW**
Standards Transmission Heat Loss: **0.00kW**
Non-standards Transmission Heat Loss: **0.00kW**
Total Transmission Heat Loss: **0.32kW**
Number of skylights: **0**

### Level Summary:

Volume of Level: **45.6m³**
Transmission Heat Loss: **2.59kW**
Ventilation Heat Loss: **0.26kW**
Additional heating-up power: **0.76kW**

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## Result

Transmission Heat Loss: **2.59kW**
Ventilation Heat Loss: **0.26kW**
Additional heating-up power: **0.76kW**
Heat load of the heated space: **3.7kW**
Heat load of the heated space (w/o heating-up power): **2.85kW**