

A guide for operating and using your new flat efficiently



Commissioned by:

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Document produced for the tenants of:

66b Rosewell Drive, Lochore, Lochgelly, KY5 8DP

FEATURES:

- Triple glazed windows & uPVC frames
- Efficient combi boiler
- Programmable thermostat
- Flue Gas heat recovery
- Extractors in bathroom and kitchen
- 9.8m² of Solar PV tiles – 1.0kWp system (≈950kWh/ year)

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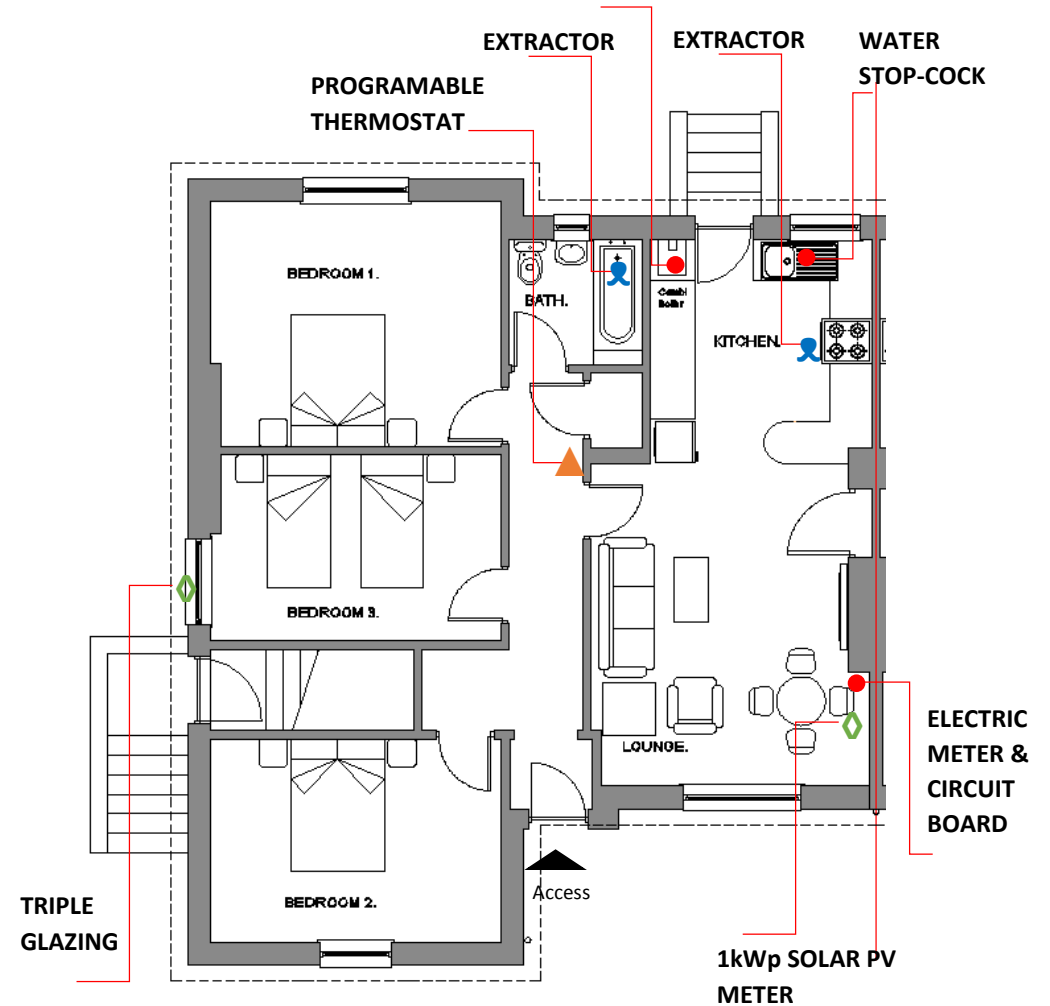
1. Overview

Identifying the main features of

YOUR FLAT:

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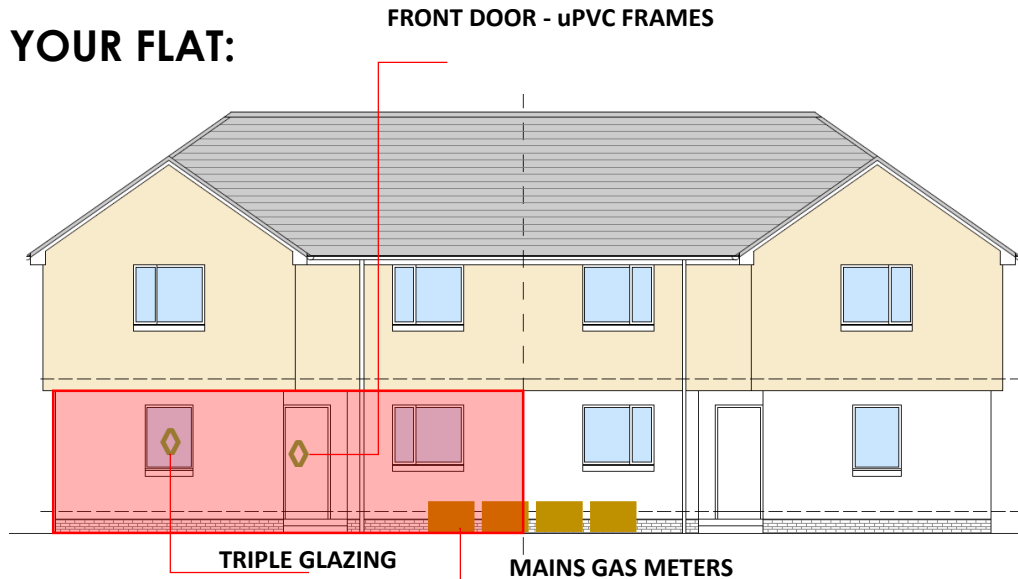


Main heating supplied by Combi boiler & radiators with independent temperature regulating valves (TRV's).

1. Overview

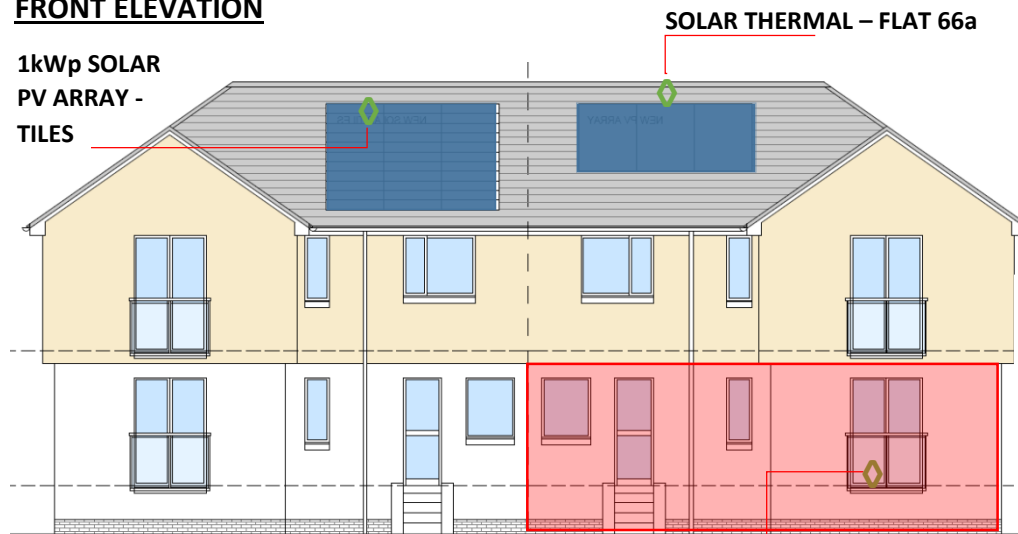
Identifying the main features of

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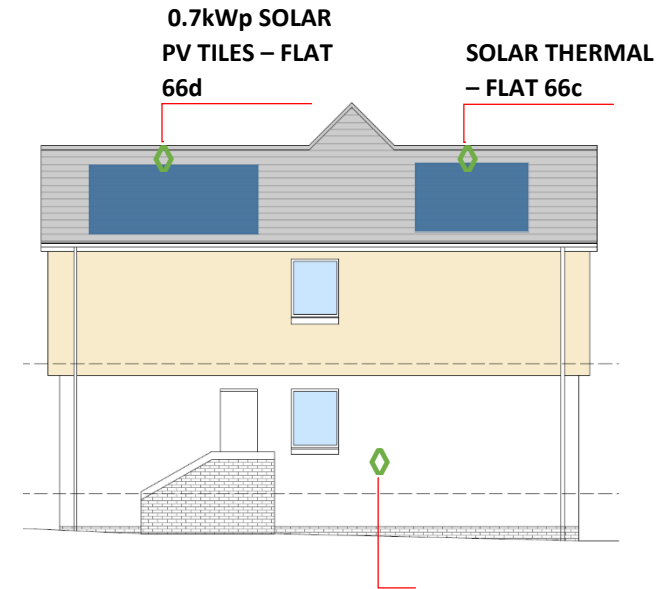
FRONT ELEVATION

1kWp SOLAR PV ARRAY - TILES



REAR ELEVATION

ENHANCED OPENINGS FOR DAYLIGHT



SIDE ELEVATION

INTERNAL INSULATION & 30MM EXTERNAL INSULATED RENDER BOARD

Welcome to your new home. This quick start guide is designed to help you get the best out of your new house, keeping your bills and carbon footprint as small as possible. Your flat has been recently enhanced to keep the heat in, additional insulation in walls and floor has been added. It has triple glazed windows and well insulated doors. Your house has an efficient gas fired heating system, and your hot water is heated by your gas boiler. Installed are also Solar PV tiles on the roof for additional day-time free electricity. At the rear, bedroom windows have been increased in size to let day light. Kitchen and living room have been opened-up to provide enhanced day-light.

2. Heating ▲

Your heating system is powered by a gas combi boiler. This provides heat for your radiators which warm the rooms. You need to adjust the thermostatic radiator valves (TRV's) and programmable thermostat to get a comfortable temperature. The construction of the house can retain heat in the winter so that it stays warmer for longer than many other houses. If the house gets too hot remember to turn the heating off before opening the windows.

Programmable thermostat: For additional flexibility and energy saving, a programmable room thermostat is installed which controls when the heating is turned on and off. They allow you to decide when heat is required over a 24-hour period – recognising that demand for heat varies from day-to-day and at the weekend. For example in the living room a fairly high temperature could be set for a couple of hours in the morning, which could then be reduced during the day when the house is unoccupied and then boosted again in the evening. **Your thermostat is located in the hall way.**



↑ Above: Vokera Unica i28 with a Flue gas heat recovery unit.

↓ Below: Vokera programmable thermostat model 711



↑ Above: TRV's installed in each radiator

Thermostatic radiator valves

(TRV's): These are located on all radiators except the one where the thermostat is located. The TRV's control the amount of heat coming out of individual radiators. When the room is at the right temperature they turn the valve off. If the room gets cooler then the radiator turns on again. The settings are simple: 1 is less heat out and 5 is the highest heat out. 5 is no warmer than 4, but means the radiator does not turn off even if it gets very warm.



DO learn how to set your programmer. There are instructions for this in the links below.

DO set your thermostat for a comfortable temperature

DO set your Thermostatic radiator valves to provide comfort, normally 3 or 4 is about right.

DO remember to make sure the clocks is changed when clocks are set back or forward.



DON'T set your thermostat too high, you can save energy and money by keeping this about 20°C or 21°C

DON'T set your Thermostatic radiator valves to 5.

Don't dry clothes over radiators.

Please see Appendix A for instructions on how to set the programmable thermostat. For more information on the User instructions, installation and servicing see this link: [Vokera Unica i28](#) and [711 thermostat](#). Vokera Boilers – Unica brand web site: <http://www.vokera.co.uk/combi-boiler/unica-i/>

3. Ventilation

Your flat has been designed to be ventilated by hybrid systems through the supply of fresh air using the windows trickle vents and to remove excess moisture, odours and stale air with the use of centrifugal extract fans.

All windows have trickle vents which can be manually open/ closed. It is recommended that they are kept open to have fresh air into the rooms.

Although these can generate a small draught and some noise, the fresh air provides healthy conditions. If drying clothes on a clothes drying rack, maintaining this fresh air not only dries them quicker but also extracts moisture from the room.

Extractors are located in the bathroom and the kitchen. Centrifugal fans force air to move at right angles to the intake of the fan using centrifugal force making it more efficient. Extractors in the bathroom are activated by the intermittent light switch and should be used when showering and/or bathing. The extractor in the kitchen is operated by an independent switch and should be used to take out odours, steam and stale air while cooking.



↑ Above: Silavent standard centrifugal fan in Kitchen

↓ Below: Silavent standard centrifugal fan in bathroom (example)



↑ Above: CMS windows with trickle vents (external view)

Windows have been designed as “Tilt & Turn” which means you can open them partially to provide added fresh air into the room and to release moisture without fully opening the window. Ventilation during winter months is important as air changes between the inside and outside are less common causing poor air quality. Opening windows in the winter months for at least 1 hour per day will benefit your health and ensure your property is working properly.

For more information on the User instructions, installation and servicing see this link: [Extract fans – Silavent](#) and [CMS windows – tilt and turn](#)



DO use extractor fans when showering and bathing

DO turn extract fan when cooking

DO clean the fans facia at least every month

DO leave trickle vents open during the winter months as well as summer.

DO use the tilt and turn system in windows to allow fresh air



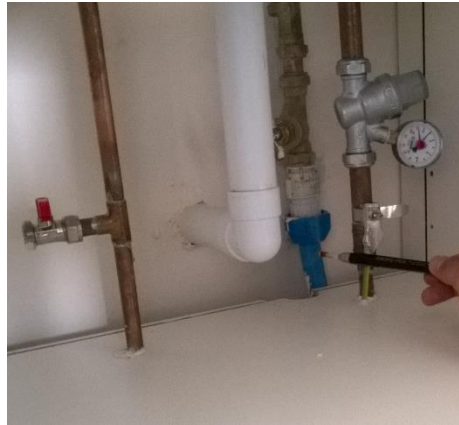
DON'T switch off the intermittent switch in the bathroom.

DON'T block or seal trickle vents in windows

DON'T dry clothes over radiators as it produces hot moist air that is unhealthy

4. Hot Water •

Hot water is provided by the Vokera combi boiler set by the programmable thermostat located in the hall way. The boiler is able to store and heat water instantaneously to be used in the bathroom and kitchen. All hot water requiring units have been fitted with an anti-scalding mixing valve to avoid any injuries with high water temperatures. It is essential that boilers are inspected once a year and after 10 years of use consider replacement or major refurbishment.



↑ Above: Anti-scalding valve to keep water temperature below 48°C



DO try to use limited hot water when washing dishes

DO limit your bath shower times to max 10 minutes

DO avoid using the bath as it consumes vast amounts of hot water

DO wash clothes at 30 or 40°C



DON'T disconnect or replace the anti-scalding valves

DON'T let water run for too long unnecessarily

For more information on the User instructions, installation and servicing see this link: [Energy Saving Trust](#) & [Vokera Boilers](#)

5. Energy Saving Features ◊

Your home has been recently refurbished from a run-down property to a highly efficient flat that has innovated in the way it keeps heat indoors and also how it can efficiently heat water and its interior space. Most of these features are present in the flats envelope and also as innovative technology. Your flat has the following energy saving features: triple glazing windows, low energy lightbulbs, solar PV tiles, enhanced internal insulation and efficient water/ heating controls.



↑ Above: Solar PV panels generating around 950 kWh per year



DO ask about maintenance to PV tiles

DO use energy efficient lightbulbs



DON'T unnecessarily puncture walls

Solar PV tiles will provide free electricity during the day which is automatically used when needed. Any surplus will be fed back into the grid. All walls have been enhanced by having a 30mm insulating board externally, cavity wall insulation, fibreglass insulation between dwangs and a solid board of insulation before the dry lining.

6. Keeping it Working

Your house requires regular maintenance to ensure it continues to work well for many years. Poorly maintained systems tend to be more inefficient and cost more to run.

Every Month

- Wash facias of extractor fans
- Wash extractor fan filters
- Check that your PV meter is recording electricity generation

Every Year

- Boiler check by Registered Gas Safe Engineer
- Get a specialist MCS accredited engineer to check the Solar PV inverter and to wash tiles
- Twice a year make sure windows are clean to enhance day-light to use less artificial light
- Replace the kitchen extractor filter



↑ Above: Solar PV panels require washing once a year to maintain efficiency

7. Links, References and more information

This quick guide to your home includes relevant websites for more information about the technology in the flat. It is essential that any problems encountered are discussed with your housing provider and that maintenance checks are done on a yearly basis. Here are some more links to important information:

- [Ventilation Do's & Don't's](#)
- [How to use your room and radiator thermostats efficiently](#)
- [Replacement fan equipment – Silavent by Polypipe](#)
- [Energy Saving Trust – Solar PV's \(You Tube Video\)](#)
- [Generic Energy Saving Trust information on energy efficiency](#)

*The above links can be accessed by double clicking on the blue writing above



References: The Scottish Government (2011), Guidance for Living in a Low Carbon Home, MEARU & 55° North Architecture, Published by Building Standards Division, Crown Copyright 2011.

Post-handover observations and meter readings

Year one

Tenants name:

Number of occupants:

Ages:

Maintenance checks		
Date	Engineer or staff member	Changes & observations

Electricity meter readings		
Date	Meter reading	Observations
		Hand over
		Quarter 1 (3 months)
		Quarter 2 (6 months)
		Quarter 3 (9 months)
		Quarter 4 (12 months)

Energy consumption meter readings:

Gas meter readings		
Date	Meter reading	Observations
		Hand over
		Quarter 1 (3 months)
		Quarter 2 (6 months)
		Quarter 3 (9 months)
		Quarter 4 (12 months)

Solar PV or water meter readings		
Date	Meter reading	Observations
		Hand over
		Quarter 1 (3 months)
		Quarter 2 (6 months)
		Quarter 3 (9 months)
		Quarter 4 (12 months)

Post-handover observations and meter readings

Year Two

Tenants name:

Number of occupants:

Ages:

Maintenance checks		
Date	Engineer or staff member	Changes & observations

Electricity meter readings		
Date	Meter reading	Observations
		Hand over
		Quarter 1 (3 months)
		Quarter 2 (6 months)
		Quarter 3 (9 months)
		Quarter 4 (12 months)

Energy consumption meter readings:

Gas meter readings		
Date	Meter reading	Observations
		Hand over
		Quarter 1 (3 months)
		Quarter 2 (6 months)
		Quarter 3 (9 months)
		Quarter 4 (12 months)

Solar PV or water meter readings		
Date	Meter reading	Observations
		Hand over
		Quarter 1 (3 months)
		Quarter 2 (6 months)
		Quarter 3 (9 months)
		Quarter 4 (12 months)

Appendix A – Programmable thermostat settings

SETTING TIME OF DAY AND DAY OF WEEK



Press the spanner icon then the right – button. Wait until the symbols start flashing, then press the spanner again. Use the + up and down buttons to set the hour. Press the right – button again to enter setting the minutes, use the + up and down buttons to set minutes, press the spanner to exit.



Press the spanner symbol then the right – button twice. The house symbol will now appear. When the symbols start flashing, press the spanner again and use the – buttons to set the day, Monday is , Tuesday is , etc. When set press the spanner to exit.

SETTING THE TEMPERATURES



Press the spanner symbol twice when the comfort temperature flashes, use the + up and down buttons to set the desired temperature. To set the economy temperature (the minimum temperature you want the house to be) press the right – button in this mode , use the + up and down buttons to set, then press the spanner to exit.

SETTING THE ON AND OFF TIMES



Press the spanner button once then the right hand – button three times. Once the black bars start flashing press the spanner again. Using the right hand - button, press it until the time shows when you wish the heating to be on. You can then choose by pressing the top + button whether you wish the economy temperature set (bottom black bars), the comfort setting (top black bars) or off (no black bars). Using the spanner to repeat the settings for each hour or 30 min segment. Press the bottom + to proceed to the next day.

HOW TO OVER-RIDE THE SETTINGS



Pressing this button will advance the settings



This symbol will put the boiler on immediately and stay on indefinitely(on first version, it will revert to original settings at midnight) This symbol will put the boiler in holiday mode and will only operate at the economy temperature setting. With no symbols shown on the left the hot water only will function.

This symbol shows that communication is established and the heating works from the programmed setting: