APPROVED ENERGY LIMITED

Energy saving measures for a greener future!

Approved Energy

37 Victoria Avenue, Telford



Telford & Wrekin Co-operative Council

ECO4 LA FLEX PROJECT

About Us

Approved Energy is a company that fits energy saving measures.

We help the home owner make energy-saving improvements to their home making enhancements that could save them the most energy all depending on what type of build their property is.

Our Certifications

Approved Energy

Our Partners

Meet the Team



Sunny Khaira
CEO



Harpreet Khaira
Director



Amar Dhillon
Business Development Manager



Dorothy Stout
Senior Compliance Manager



Abigail Lees
ECO4 Compliance Admnistrator



Bethany Tayler
Eco Compliance Administrator



Shifa Begum
GBIS Coordinator



Lashawn Dhaliwal
Installer



Mohammed Hussain
Installer



Rajinder Dhami
Installer



Krzysztof Obielak
Installer

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Case Study – Location Details



37 Victoria Avenue, Wellington, Telford, TF1 1NN

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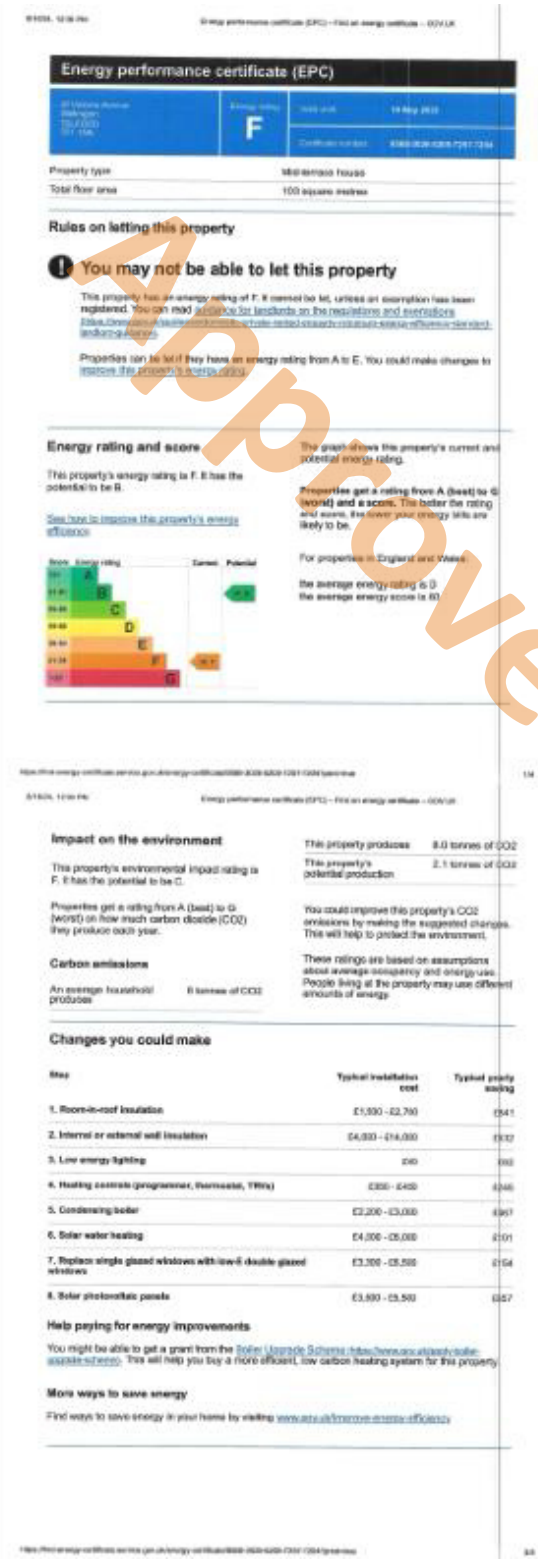
Brief Description of property:

Mid-Terrace, 3 story, solid brick property, Large property of 103 square Meters in poor condition due to bad heat retention.

EPC Rating – Before Work Commenced



Energy performance certificate (EPC)

F

Property type: Mid-terrace house

Total floor area: 100 square metres

Rules on letting this property

You may not be able to let this property

This property has an energy rating of F. It cannot be let, unless an exemption has been registered. You can read guidance for landlords on the regulations and exemptions

Properties can be let if they have an energy rating from A to E. You could make changes to improve this property's energy rating.

Energy rating and score

This property's energy rating is F. It has the potential to be B.

See how to improve this property's energy efficiency.

The graph shows this property's current and potential energy rating.

Properties get a rating from A (best) to G (worst) and a score. The better the rating and score, the lower your energy bills are likely to be.

For properties in England and Wales:

the average energy rating is D

the average energy score is 60



Breakdown of property's energy performance

Features in this property

Features get a rating from very good to very poor, based on how energy efficient they are. Ratings are not based on how well features work or their condition.

Assumed ratings are based on the property's age and type. They are used for features the assessor could not inspect.

Feature	Description	Rating
Wall	(solid brick, as built, no insulation (assumed))	Very poor
Roof	Roof room(s), no insulation (assumed)	Very poor
Window	Some double glazing	Poor
Main heating	Boiler and radiators, mains gas	Good
Main heating control	No time or thermostatic control of room temperature	Very poor
Hot water	From main system, no cylinder thermostat	Average
Lighting	Low energy lighting in 60% of fixed outlets	Good
Floor	Solid, no insulation (assumed)	N/A
Secondary heating	Room heaters, electric	N/A

Primary energy use

The primary energy use for this property per year is 443 kilowatt hours per square metre (kWh/m2).

How this affects your energy bills

An average household would need to spend £4,089 per year on heating, hot water and lighting in this property. These costs usually make up the majority of your energy bills.

You could save £2,462 per year if you complete the suggested steps for improving this property's energy rating.

This is based on average costs in 2023 when this EPC was created. People living at the property may use different amounts of energy for heating, hot water and lighting.

Heating this property

Estimated energy needed in this property is:

- 19,132 kWh per year for heating
- 3,321 kWh per year for hot water

Impact on the environment

This property's environmental impact rating is F. It has the potential to be C.

Properties get a rating from A (best) to G (worst) on how much carbon dioxide (CO2) they produce each year.

This property produces: 8.0 tonnes of CO2

This property's potential production: 2.1 tonnes of CO2

You could improve this property's CO2 emissions by making the suggested changes. This will help to protect the environment.

These ratings are based on assumptions about average occupancy and energy use. People living at the property may use different amounts of energy.

Carbon emissions

An average household produces: 6 tonnes of CO2

Changes you could make

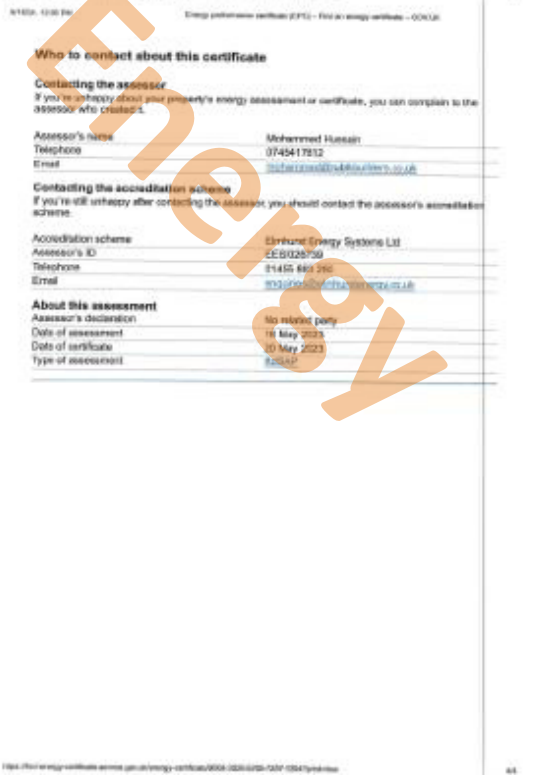
Step	Typical installation cost	Typical yearly saving
1. Room-in-roof insulation	£1,500 - £2,700	£941
2. Internal or external wall insulation	£4,000 - £14,000	£932
3. Low energy lighting	£40	£60
4. Heating controls (programmer, thermostat, TRVs)	£350 - £450	£246
5. Condensing boiler	£2,200 - £3,000	£367
6. Solar water heating	£4,000 - £6,000	£101
7. Replace single glazed windows with low-E double glazed windows	£3,300 - £5,500	£154
8. Solar photovoltaic panels	£3,500 - £5,500	£657

Help paying for energy improvements

You might be able to get a grant from the Boiler Upgrade Scheme. This will help you buy a more efficient, low carbon heating system for this property.

More ways to save energy

Find ways to save energy in your home by visiting www.gov.uk/improve-energy-efficiency.



Who to contact about this certificate

Contacting the assessor

If you're unhappy about your property's energy assessment or certificate, you can complain to the assessor who created it.

Assessor's name	Mohammed Hussain
Telephone	07454417812
Email	[redacted]

Contacting the accreditation scheme

If you're still unhappy after contacting the assessor, you should contact the assessor's accreditation scheme.

Accreditation scheme	Elmhurst Energy Systems Ltd
Assessor's ID	EES/026739
Telephone	01455 883 250
Email	[redacted]

About this assessment

Assessor's declaration	No relevant party
Date of assessment	16 May 2023
Date of certificate	20 May 2023
Type of assessment	RdSAP

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Recommended measures to be fitted:

Loft Insulation

Insulating your home with loft insulation is the simplest and most effective way to limit any heat loss. Approved Energy, ensure the home is insulated at depth of 300mm, which can reduce the cost of the heating bill by as much as 20%.

Room in Roof

When a roof space is converted into a room, it requires a different type of insulation that will fit into gaps between joists and behind walls of the room. This type of insulation helps to improve the energy efficiency of the home by reducing heat loss through the roof effectively.

Without this insulation, the room in the roof will be highly susceptible to temperature changes in both summer and winter; in addition, if there is no insulation in the Room in Roof the rest of the house will suffer from the heat loss in the winter,

Internal wall Insulation

Internal wall insulation is one of the biggest energy measures that improve the energy efficiency of the entire home.

It works by adding insulation material to the walls of your home, which helps to keep the heat inside during the winter and outside during the summer. This can lead to significant energy savings, as well as improved comfort in your home.

Reducing heat loss within your home by installing insulation within its internal property walls – also known as dry lining – is an effective way to reduce heat loss.

Approved Energy firstly fit insulating material to the walls followed by a vapour barrier, protecting against air penetration.

Overall, internal wall insulation is a great investment that not only improves your energy efficiency but also your comfort in the home, which in turn will increase the value of the property also.

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Replacement Boiler with NEW condensing boiler.

Increased Energy Efficiency- One of the key reasons why condensing boilers are the first choice of homeowners is because of their higher efficiency. This high level of efficiency is possible due to its ability to store maximum heat within the boiler, which also helps in heating the water.

Lower Carbon Footprint- Condensing boilers have significantly fewer carbon emissions, and hence, you can contribute to a greener planet. You can save around 1000 kgs of carbon every year by choosing to install one in your home.

Condensing boilers give the home owner better efficiency AND optimal cost savings

Upgraded smart Heating controls

Heating controls are essential for regulating the temperature of your home central heating system and managing energy costs.

Thermostatic radiator valves (TRVs): Attach directly to radiators, allowing you to control the temperature of individual rooms.

Programmable room thermostats: Set heating schedules based on your preferences.

AND Smart heating controls: Provide additional features and allow different heating programs to run at different times, making the property even more property efficient

Double glazed windows

Although recommended BUT not an eligible energy saving measure covered under ECO4.

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Measures to be installed

Loft insulation



Internal Wall insulation



Room in Roof Insulation



New Upgraded Condensing Boiler



Double glazing throughout



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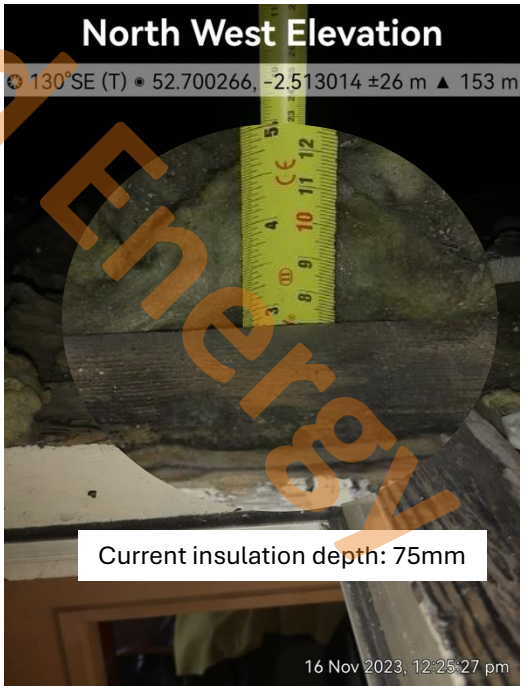
Loft Insulation

- **The loft insulation prior consisted of 75mm insulation**









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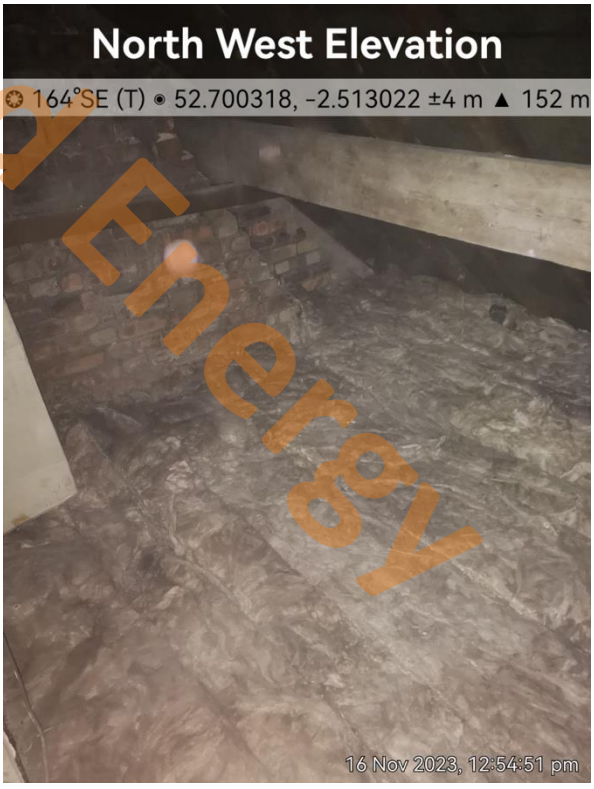
This was then topped upto 270mm using KNAUF EARTHWOOL 44









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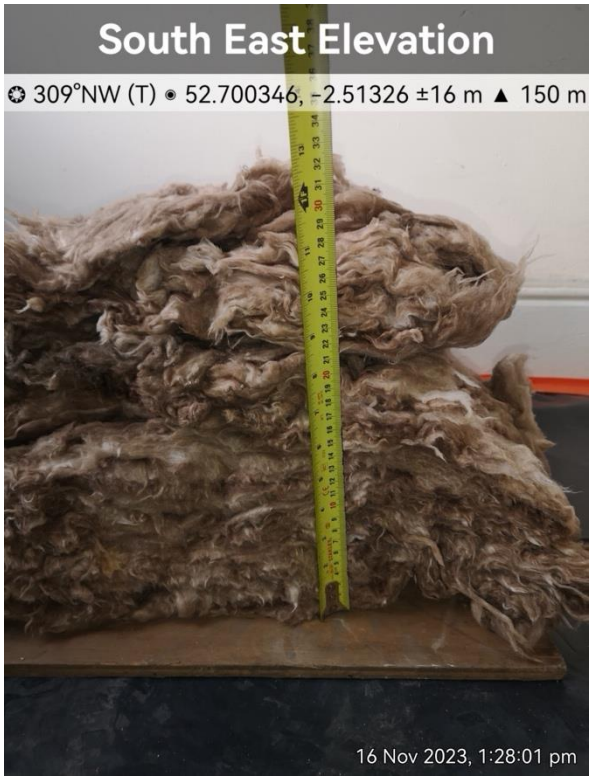





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Internal wall Insulation

The SWIP product was used to thermally insulate the inside walls of the property.

SWIP IWI system components SWIP Internal Wall Insulation provides a system based approach to internal wall insulation. The system has been tested and certified to demonstrate that all components work together as designed to deliver the required performance. The SWIP IWI System is designed for upgrading existing solid (or cavity) external Walls.

It consists of thermally engineered composite studs and Insulation Slabs, which can be combined to provide greater thicknesses of high-performance thermal insulation than achievable by using a Single thickness. SWIP Studs are a composite of high performance extruded polystyrene insulation and Oriented Strand Board (OSB). Traditional internal wall insulation which uses traditional Timber or metal studs leads to thermal bridging through the studs. This needs to be compensated for by increasing the thickness of the overall system. The innovative use of the thermally insulated SWIP Studs within the SWIP system prevents this and results in an overall thinner system.The SWIP IWI System has been designed to simplify the process of upgrading existing solid (and cavity) masonry walls whilst delivering high levels of thermal performance.

- BBA Certificate Number : 18/5506
- Certifications : BBA
- Guarantee : 40 Years
- U-value (overall): 0.43 W/m2k
- BBA Certificate Number: 18/5506
- Certifications: BBA
- Guarantee: 40 Years
- U-value (overall): 0.3 W/m2k
- BBA Certificate Number: 18/5506
- Certifications: BBA

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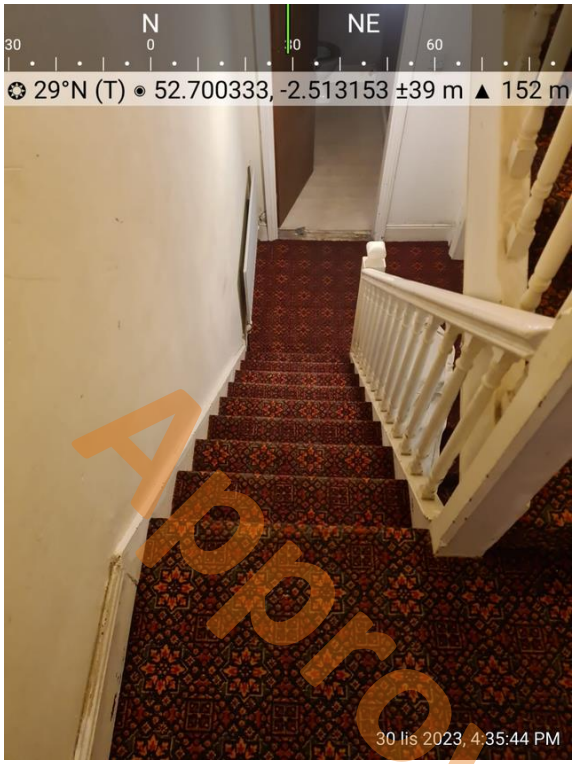
Pre (before) pics









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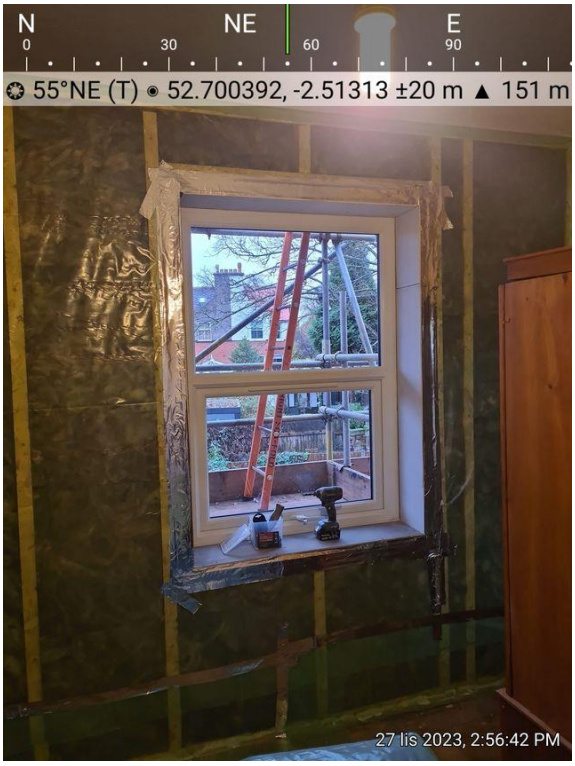
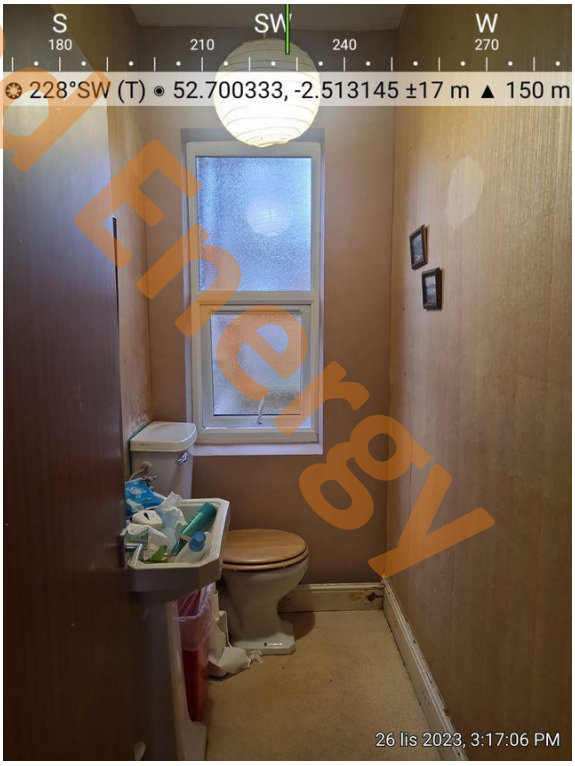
Mid and Post (after) pics









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Room in Roof

Again the SWIP product was used for us

Pre (before) pic



Post (after) pic



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Boiler Upgrade

The property was fitted initially fitted with a non-condensing Boiler which was an Apollo EM I heat only boiler.

This was replaced with a Worcester Bosch 4000 GREEN STAR 4700IW 30Kw

SAP rating of old boiler 66%

SAP rating of new boiler 88,7%

So the heating efficiency was upgraded considerably.

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Pre Pic



Existing boiler

Post Pic



New boiler

TTZC's

The property was not initially fitted with any TRV or any controls to control the heating in each individual room.

This was upgraded to Worcester comfort 11RF Class V smart thermostat with Worcester TRV's

When used with the EasyControl thermostat, the Worcester Digital Smart Radiator Thermostat Heads (Smart TRVs) can easily control the heating in each individual room to give maximum comfort when and where you want it.

The Worcester smart TRV's even come with a child-lock setting, controlled through the EasyControl.

Compatible with the following valve bodies using the connection rings included in the box -

- **Danfoss - RA, RAV and RAVL**
- **Most Honeywell**

Pre Pic



Existing radiators

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Post Pic





Smart thermometer



Radiators with thermostatic room valve

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Post work picture of property showing new double glazed windows



EPC Rating – After Works Complete



Energy performance certificate (EPC)

37 Victoria Avenue Wellington TELFORD TF1 1MN	Energy rating C	Valid until:	15 August 2024
		Certificate number:	0504-5722-7296-0504-6222

Property type	Mid-terrace house
Total floor area	103 square metres

Rules on letting this property

Properties can be let if they have an energy rating from A to E.

You can read guidance for landlords on the regulations and exemptions (https://www.gov.uk/guidance/domestic-private-rented-property-minimum-energy-efficiency-standard-landlord-guidance).

Energy rating and score

This property's energy rating is C. It has the potential to be B.

See how to improve this property's energy efficiency.

The graph shows this property's current and potential energy rating.

Properties get a rating from A (best) to G (worst) and a score. The better the rating and score, the lower your energy bills are likely to be.

For properties in England and Wales:

the average energy rating is D
the average energy score is 60

Breakdown of property's energy performance

Features in this property

Features get a rating from very good to very poor, based on how energy efficient they are. Ratings are not based on how well features work or their condition.

Assumed ratings are based on the property's age and type. They are used for features the assessor could not inspect.

Feature	Description	Rating
Wall	Solid brick, with internal insulation	Very good
Roof	Roof room(s), insulated	Good
Window	Some double glazing	Very poor
Main heating	Boiler and radiators, mains gas	Good
Main heating control	Time and temperature zone control	Very good
Hot water	From main system	Good
Lighting	Low energy lighting in all fixed outlets	Very good
Floor	(other premises below)	N/A
Secondary heating	None	N/A

Primary energy use

The primary energy use for this property per year is 168 kilowatt hours per square metre (kWh/m2).

How this affects your energy bills

An average household would need to spend **£1,281 per year on heating, hot water and lighting** in this property. These costs usually make up the majority of your energy bills.

You could **save £194 per year** if you complete the suggested steps for improving this property's energy rating.

This is **based on average costs in 2024** when this EPC was created. People living at the property may use different amounts of energy for heating, hot water and lighting.

Heating this property

Estimated energy needed in this property is:

- 9,279 kWh per year for heating
- 1,969 kWh per year for hot water

Impact on the environment

This property's environmental impact rating is C. It has the potential to be B.

Properties get a rating from A (best) to G (worst) on how much carbon dioxide (CO2) they produce each year.

Carbon emissions

An average household produces	6 tonnes of CO2
This property produces	3.0 tonnes of CO2
This property's potential production	1.5 tonnes of CO2

You could improve this property's CO2 emissions by making the suggested changes. This will help to protect the environment.

These ratings are based on assumptions about average occupancy and energy use. People living at the property may use different amounts of energy.

Changes you could make

Step	Typical installation cost	Typical yearly saving
1. Draught proofing	£80 - £120	£41
2. Solar water heating	£4,000 - £6,000	£57
3. Replace single glazed windows with low-E double glazed windows	£3,300 - £5,500	£96
4. Solar photovoltaic panels	£3,500 - £5,500	£511

Help paying for energy improvements

You might be able to get a grant from the Boiler Upgrade Scheme (https://www.gov.uk/apply-boiler-upgrade-scheme). This will help you buy a more efficient, low carbon heating system for this property.

More ways to save energy

Find ways to save energy in your home by visiting www.gov.uk/improve-energy-efficiency

Who to contact about this certificate

Contacting the assessor

If you're unhappy about your property's energy assessment or certificate, you can complain to the assessor who created it.

Assessor's name	Mandip Bansal
Telephone	07706706707
Email	mandipbansal@hotmail.com

Contacting the accreditation scheme

If you're still unhappy after contacting the assessor, you should contact the assessor's accreditation scheme.

Accreditation scheme	Elmhurst Energy Systems Ltd
Assessor's ID	EES/025794
Telephone	01455 883 250
Email	enquiries@elmhurstenergy.co.uk

About this assessment

Assessor's declaration	No related party
Date of assessment	24 February 2024
Date of certificate	16 August 2024
Type of assessment	RdSAP

Approved Energy

Approved Energy Ltd

Locations

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