APPROVED ENERGY LIMITED

Energy saving measures for a greener future!

Approved Energy

15 Haden Road, Cradley Heath



Sandwell Metropolitan Borough Council

ECO4 LA FLEX PROJECT

About Us

Approved Energy is a company that fits energy saving measures.

We help the homeowner 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



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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 Dhani
Installer



Krzysztof Obielak
Installer



Husan Hussain
Installer

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Case Study – Location Details



15 Haden Road, Cradley Heath, B64 6ER

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Brief Description of property:

A large three storey end terraced property in the suburbs of Cradley Heath. Approximately 230 sq metres in size. Was used as an ex-surgery before the current hom owner purchased the property. Full of old period features.

The property boasts:

3 receptions rooms plus kitchen and utility

5 bedrooms

Large Bathroom

Separate WC

EPC Rating – Before Work Commenced

ENERGY REPORT

RdSAP
elmhurst energy

Dwelling Address	15, Haden Road, CRADLEY HEATH, B64 6ER
Reference	001139
Assessment Date	13/03/2024
Submission Date	17/09/2024
Property Type	End-Terrace House
Total Floor Area	237 m²

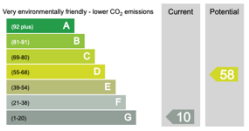
This Energy Report has been generated using the UK's National Calculation Methodology for existing dwellings, Reduced data Standard Assessment Procedure (RdSAP). This methodology is used to assess the energy efficiency of existing dwellings which is calculated based on a dwelling's heating, hot water and lighting usage.

This document is not an Energy Performance Certificate (EPC) as required by the Energy Performance of Buildings Regulations.

Energy Efficiency Rating



Carbon Dioxide (CO_2) Emissions Rating



Additional ratings for your home

	Primary Energy	Energy Used	Carbon	Cost	HTC
CURRENT	571.35 kWh/m²	135358 kWh	27873.1 kg	8602 £	1223 W/K
POTENTIAL	162.56 kWh/m²	38512 kWh	8447.7 kg	2412 £	493 W/K

[office use only: U532-0001 4.15r0011]

Fit to width

Recommendations

The recommended measures provided below will help to improve the energy efficiency of the dwelling. To reach the dwelling's potential energy rating all of the recommended measures shown below would need to be installed. Having these measures installed individually, or in a different order, may change the result when compared with the cumulative potential rating.

Recommended measures	Cumulative savings (per year)	Cumulative rating	Typical costs	Incremental savings (per year)	Cumulative CO2 rating
Increase loft insulation to 270 mm	£718	F 23	£100 - £350	£718	G 13
Room-in-roof insulation	£1,611	F 30	£1,500 - £2,700	£893	G 19
Internal or external wall insulation	£3,332	E 44	£4,000 - £14,000	£1720	F 31
Floor insulation (suspended floor)	£3,682	E 47	£800 - £1,200	£350	F 34
Draught proofing	£3,945	E 50	£80 - £120	£263	F 36
Low energy lighting for all fixed outlets	£4,104	E 52	£90	£159	F 37
Heating controls (programmer, room thermostat and TRVs)	£4,778	D 59	£350 - £450	£674	E 44
Replace boiler with new condensing boiler	£5,543	D 67	£2,200 - £3,000	£766	E 52
Replace single glazed windows with low-E double glazed windows	£5,693	D 68	£3,300 - £6,500	£149	E 54
Solar photovoltaic panels, 2.5 kWp	£6,190	C 73	£3,500 - £5,500	£497	D 58

The typical cost is based on average installation prices across the country so may not be representative of the actual costs in your area.

Estimated energy costs of the dwelling

The table below shows the estimated running costs of the space and water heating and lighting within the dwelling. It does not include the energy used from household appliances. The estimated annual costs after potential improvements indicates the total energy cost if all recommended measures named above were installed.

	Estimated annual costs	Estimated annual costs after potential improvements	Potential future savings
Lighting	£421	£214	You could save £6190
Heating	£7903	£2492	
Hot Water	£278	£203	
New Technologies e.g. Impact of PV	£0	- (£497)	
TOTAL	£8602	£2412	

[office use only: U532-0001 4.15r0011]

RdSAP
elmhurst energy systems

Summary Information

Surveyor:	U532-0001		
Name:	Mandip Bansal	**Title:** Mr.	**Tel Number:** 07706706707
Survey Reference:	001139	**My Reference:**	PRE EPR
Current SAP rating:	G 19	**Potential SAP rating:** C 73	**Emissions (t/year):** 27.873 tonnes
Current EI rating:	G 10	**Potential EI rating:** D 58	**Fuel Bill:** £8602

Property Details:

RdSAP version:	SAP 9.94
Reference Number:	U532-0001-001139
My Reference:	PRE EPR
Lodgement Required:	No
Regs Region:	England
EPC Language:	English
UPRN:	
Postcode:	B64 6ER
Region:	Midlands
House Name:	
House No:	15
Street:	Haden Road
Locality:	
Town:	CRADLEY HEATH
County:	
Property Tenure:	Owner-occupied
Transaction Type:	ECO assessment
Inspection Date:	13/03/2024
Process date:	17/09/2024
Check for the existence of an EPC:	No
Does an EPC exist at the point of carrying out this energy assessment:	No
Reason why another energy assessment needs to be undertaken:	

RdSAP Inputs

Property Description:

1.0 Property type:		H House E End-Terrace		
2.0 Number of	**Storeys:**	3		
	Habitable Rooms:	7		
	Heated Habitable Rooms:	7		
3.0 Date Built:	**Main Property**	B 1900-1929	**Main Prop. Room(s) in Roof**	B 1900-1929
	1st Extension	F 1976-1982		
	2nd Extension	G 1983-1990		
	3rd Extension	H 1991-1995		

4.0 Dimensions:

Dimension type: Internal

Main Property

	Floor Area [m2]	Room Height [m]	Heat Loss Wall Perimeter [m]	Party Wall Length [m]
Room(s) in Roof:	30.07			
1st Floor:	98.11	2.76	41.59	9.67
Lowest Floor:	98.11	2.97	29.75	9.67
1st Extension				
2nd Floor:	0.00	0.00	0.00	0.00
1st Floor:	0.00	0.00	0.00	0.00
Lowest Floor:	3.70	2.48	4.13	0.00
2nd Extension				
2nd Floor:	0.00	0.00	0.00	0.00
1st Floor:	0.00	0.00	0.00	0.00
Lowest Floor:	3.69	2.43	8.43	0.00

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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.

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

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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 homeowner 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

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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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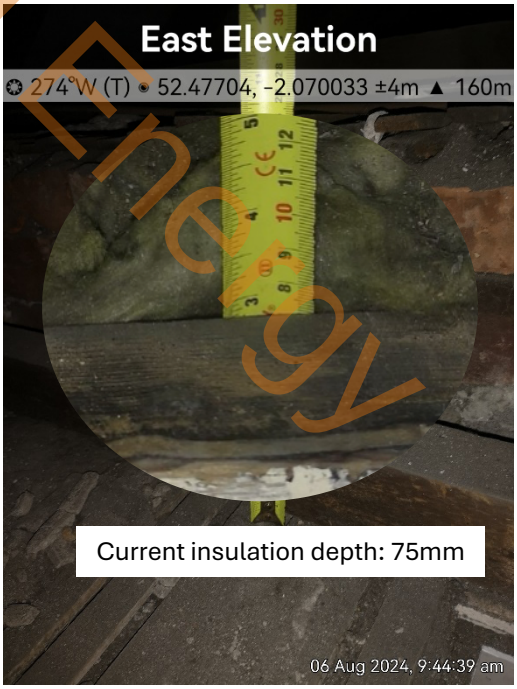
Loft Insulation

- The property had a total of 5 lofts all lacking in loft insulation. Pre-depth consisted of 50-75mm insulation in each of the lofts.









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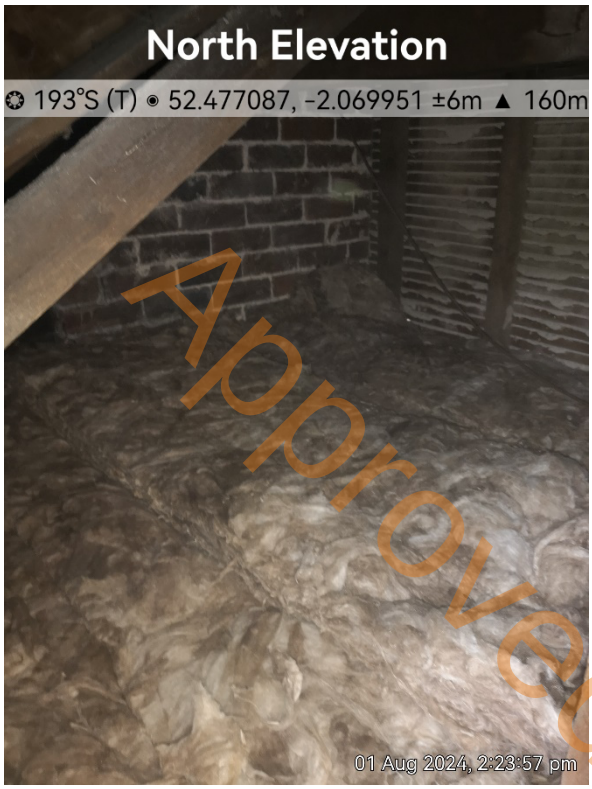
This was then topped upto 270mm using KNAUF EARTHWOOL 44









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Loft Hatches

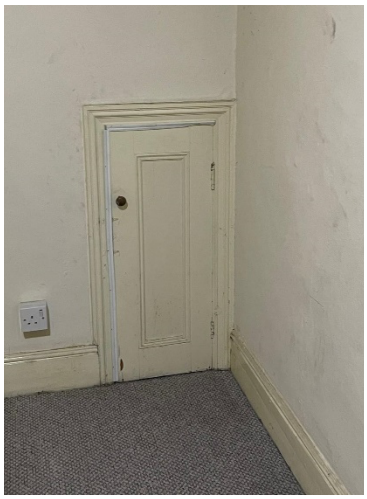
4 loft hatches were fitted in total.

- 545mmx715mm in dimension
- Overall width: 686mm
- Insulated with Polystyrene
- Thermally insulated lid
- 3 point catch fixing providing a secure draft free sealed fit.
- Thermally insulated lid













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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

South East Elevation

✪ 333°NW (T) ◉ 52°28'36"N, 2°4'12"W ±98ft ▲ 368ft



South East Elevation

✪ 299°NW (T) ◉ 52°28'37"N, 2°4'11"W ±131ft ▲ 367ft



East Elevation

✪ 266°W (T) ◉ 52°28'36"N, 2°4'12"W ±19ft ▲ 369ft



South East Elevation

✪ 304°NW (T) ◉ 52°28'36"N, 2°4'12"W ±16ft ▲ 369ft



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Mid and Post (after) pics









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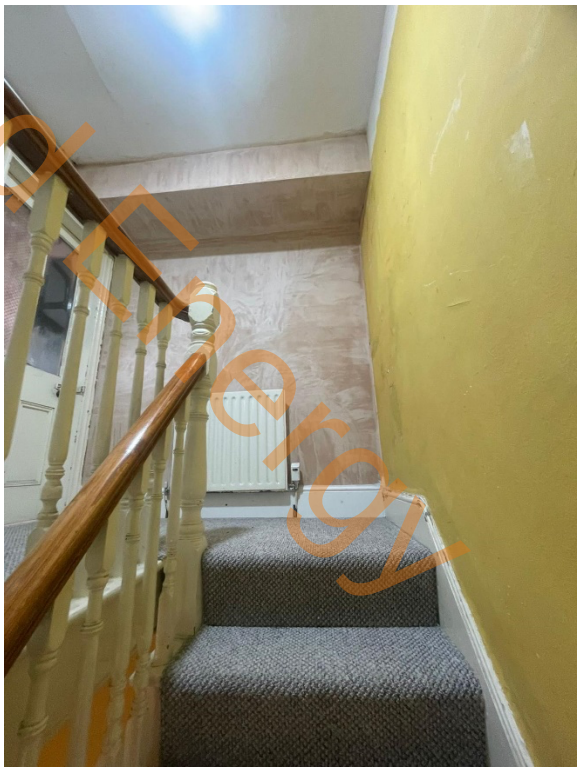

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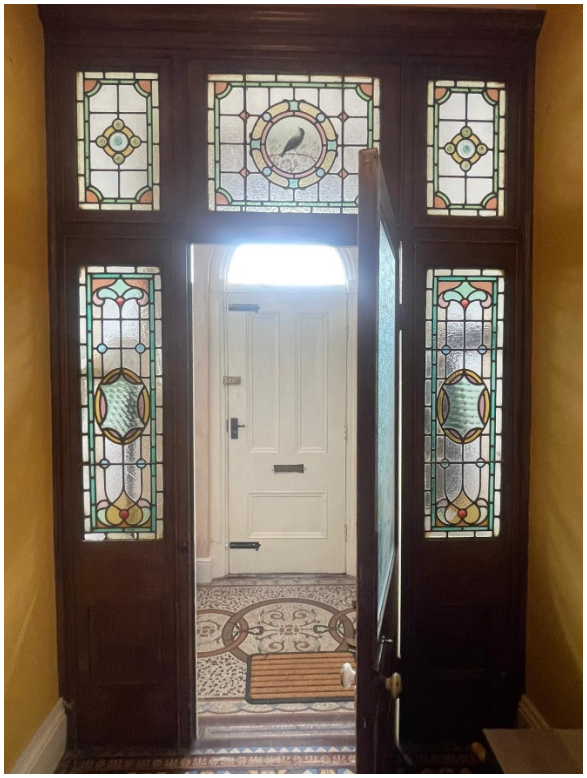



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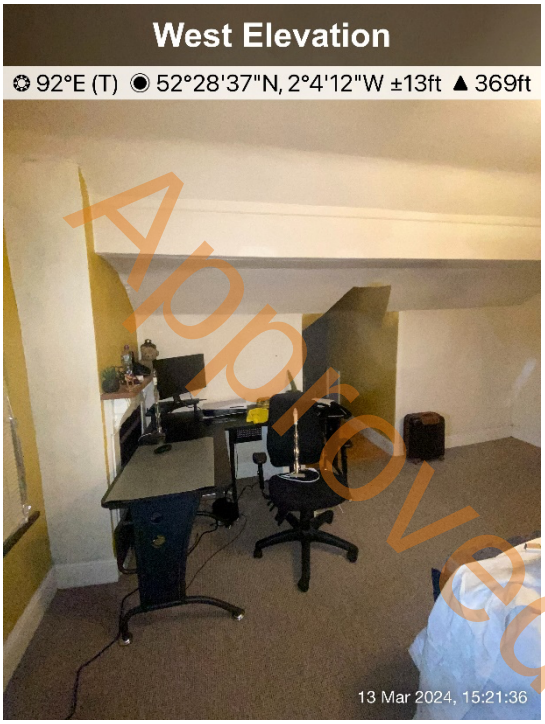
Room in Roof

Again the SWIP product was used

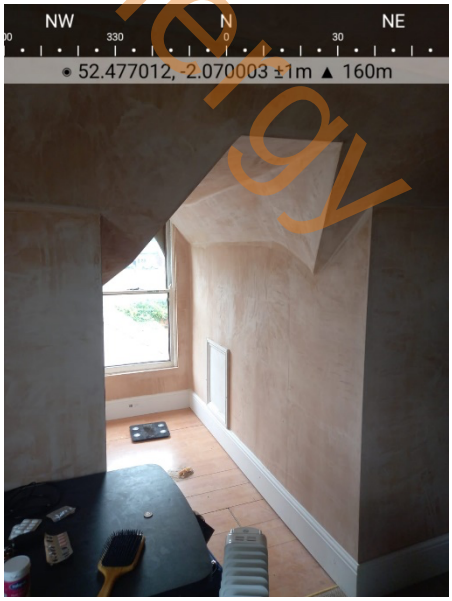
Pre (before) pics





Post (after) pics





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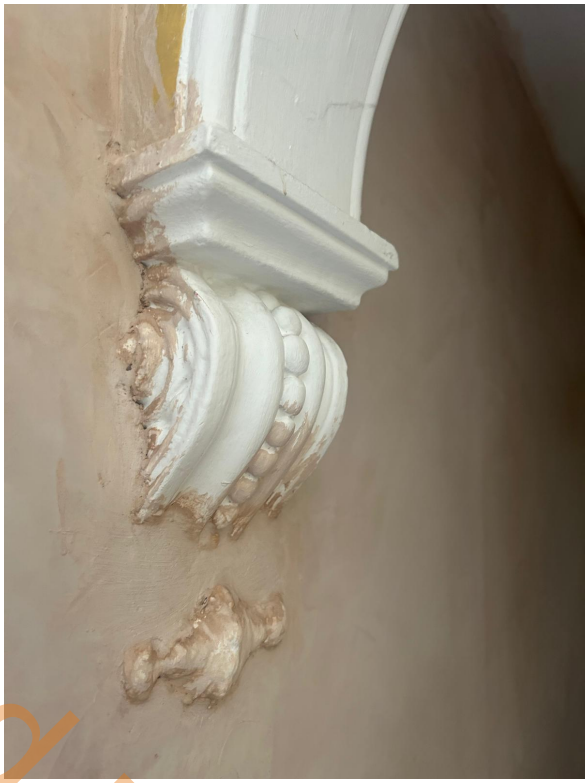
Period Features

Extra care was taken to ensure that any period features and detail was kept intact to minimise visual impact and retain authenticity.









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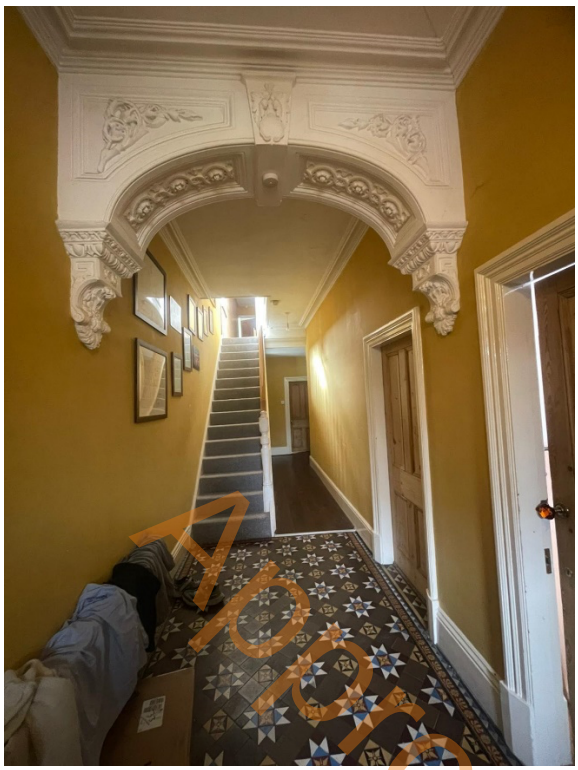

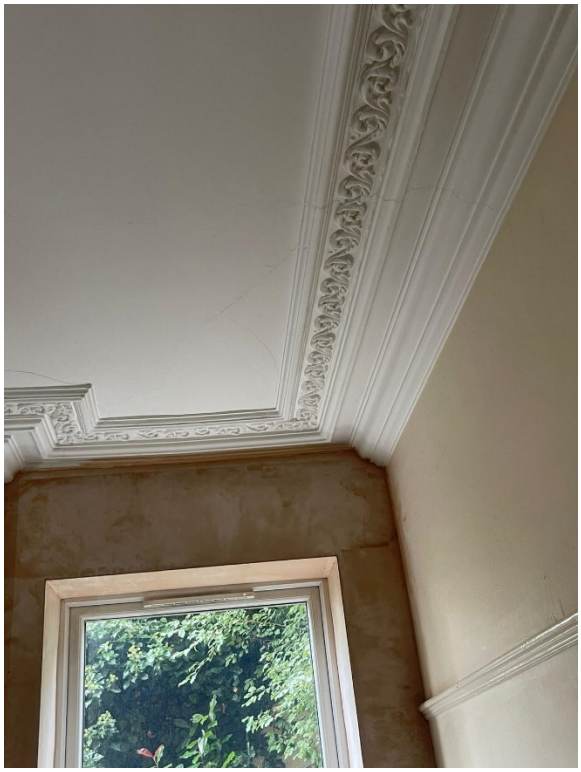

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Boiler Upgrade

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



Post Pic



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

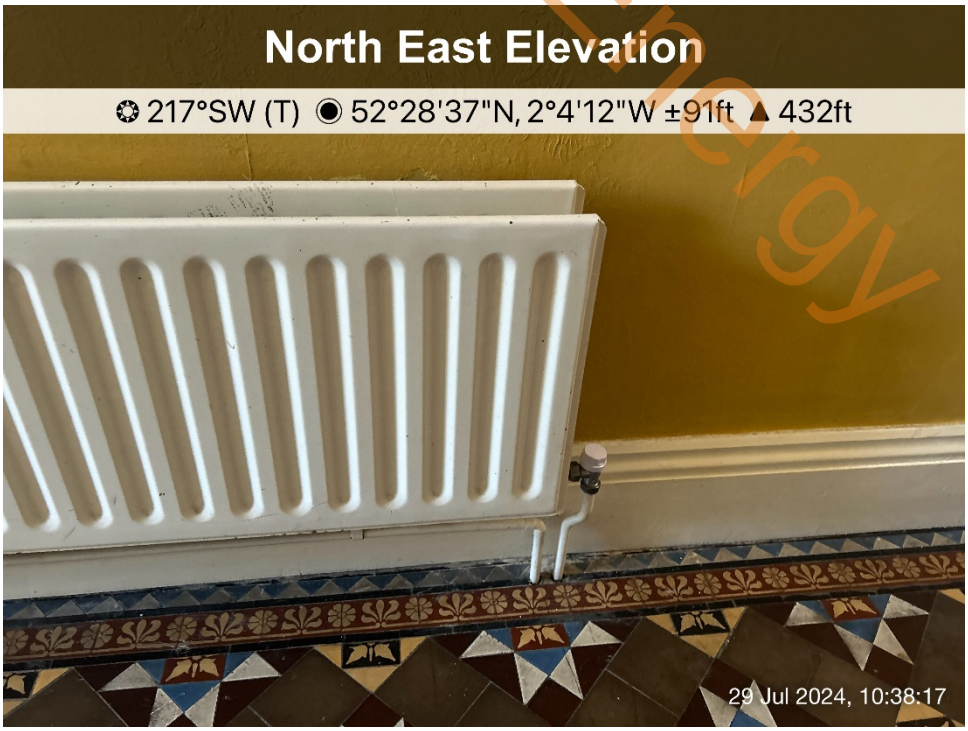
When used with the EasyControl thermostat, the Worcester Digital Smart Radiator Thermostat Heads (Smart TRVs) can easily control the heating in each individual room to give maximum comfort when and where you want it.

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



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Post Pics













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Sockets and Extractors









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EPC Rating – After Works Complete

Energy performance certificate (EPC)

15 Haden Road CRADLEY HEATH B64 6ER	Energy rating **D**	Valid until:	**27 January 2035**
		Certificate number:	**7735-6729-9200-0583-9222**

Property type	End-terrace house
Total floor area	237 square metres

Rules on letting this property

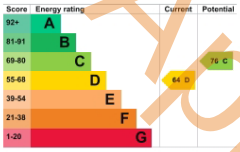
Properties can be let if they have an energy rating from A to E.

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 D. It has the potential to be C.

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

Impact on the environment

This property's environmental impact rating is E. It has the potential to be D.

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	11.0 tonnes of CO2
This property's potential production	7.5 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.

Steps you could take to save energy

Step	Typical installation cost	Typical yearly saving
1. Floor insulation (suspended floor)	£800 - £1,200	£144
2. Draught proofing	£80 - £120	£108
3. Low energy lighting	£90	£133
4. Replace single glazed windows with low-E double glazed windows	£3,300 - £6,500	£231
5. Solar photovoltaic panels	£3,500 - £5,500	£419

Advice on making energy saving improvements

Get detailed recommendations and cost estimates (www.gov.uk/improve-energy-efficiency)

Help paying for energy saving improvements

You may be eligible for help with the cost of improvements:

- Insulation: Great British Insulation Scheme (www.gov.uk/apply-great-british-insulation-scheme)
- Heat pumps and biomass boilers: Boiler Upgrade Scheme (www.gov.uk/apply-boiler-upgrade-scheme)
- Help from your energy supplier: Energy Company Obligation (www.gov.uk/energy-company-obligation)

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 external insulation	Good
Roof	Pitched, 300 mm loft insulation	Very good
Roof	Roof room(s), insulated	Good
Window	Some triple glazing	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	No low energy lighting	Very poor
Floor	Suspended, no insulation (assumed)	N/A
Secondary heating	Room heaters, smokeless fuel	N/A

Primary energy use

The primary energy use for this property per year is 211 kilowatt hours per square metre (kWh/m2).

How this affects your energy bills

An average household would need to spend **£2,792 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 £616 per year** if you complete the suggested steps for improving this property's energy rating.

This is **based on average costs in 2025** 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:

- 27,623 kWh per year for heating
- 2,144 kWh per year for hot water

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/025784
Telephone	01455 883 250
Email	enquiries@elmhurstenergy.co.uk

About this assessment

Assessor's declaration	No related party
Date of assessment	27 January 2025
Date of certificate	28 January 2025
Type of assessment	RdSAP

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Summary



Sunny Khaira, director of Approved Energy spoke with the homeowner after the project was complete, who was happy to report that his team had done an outstanding job.

The full case study video is available now on the Approved Energy homepage.

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Approved Energy Ltd

Locations

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