

S13 Evaluation Report – Reducing Energy Consumption in Existing Buildings

Project: Proposed extensions and refurbishments to 3 Potterhanworth Road, Nocton, Lincoln. LN4 2BP

Client: Mr N Wright.

Agent: Trouville Consultancy Ltd.

Council: North Kesteven District Council.

Project details

The proposal will extend and refurbish the existing semi-detached stone cottage. Small ground floor extension to the rear forming a Utility room and a one and a half storey side extension to provide Entrance area, Store room and Small Lounge to ground floor with Dormer Bedroom at first floor level following the roof format of the existing cottage.

Introduction

This S13 Evaluation Report has been prepared by Trouville Consultancy Ltd in support of the planning application, for the refurbishment and extension of 3 Potterhanworth Road, Nocton.

The purpose of this document is to assess the improvement of the thermal performance of the existing building.

Location & Description of Site

The site is located on Potterhanworth Road in Nocton. The site level and the building forms the right hand side of a semi detached cottage. Front elevation faces West.

Assessment of impact

The Energy Performance Certificate is included in Appendix 1 of this report. The EPC has graded the existing cottage with an energy rating of F. The worst areas of the existing building being the Walls (Very poor), Roof and Heating/ Hot water system (All poor).

Improvement proposals

The roof insulation will be brought up to current BR elemental standards by the provision of rigid insulation board fixed between the rafters and underdrawn with thermal board.

Existing external walls will be improved by lining the inner face with a thermal board system.

Windows will be replaced with upvc thermal break frames with high efficiency glazed units.

A new oil fired condensing boiler is to be installed serving the whole property, the system will have time and thermostatic zoned controls.

All pipework and storage vessels will be insulated where required by the services design.

All lighting will incorporate low energy fittings and lamps.

Appendix 1: Energy Performance Certificate

Energy performance certificate (EPC)

3 Potterhanworth Road
Nocton
LINCOLN
LN4 2BP

Energy rating

F

Valid until: 28 April 2032

Certificate number: 2415-0065-2204-6312-1204

Property type

Semi-detached house

Total floor area

74 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 \(https://www.gov.uk/guidance/domestic-private-rented-property-minimum-energy-efficiency-standard-landlord-guidance\)](https://www.gov.uk/guidance/domestic-private-rented-property-minimum-energy-efficiency-standard-landlord-guidance).

Properties can be let if they have an energy rating from A to E. The [recommendations section](#) sets out changes you can make to improve the property's rating.

Energy rating and score

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

[See how to improve this property's energy efficiency.](#)

Score	Energy rating	Current	Potential
92+	A		
81-91	B		87 B
69-80	C		
55-68	D		
39-54	E		
21-38	F	33 F	
1-20	G		

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	Sandstone or limestone, as built, no insulation (assumed)	Very poor
Roof	Roof room(s), ceiling insulated	Poor
Window	Fully double glazed	Good
Main heating	Boiler and radiators, oil	Poor
Main heating control	Programmer and room thermostat	Average
Hot water	From main system	Poor
Lighting	Low energy lighting in 29% of fixed outlets	Average
Floor	Solid, no insulation (assumed)	N/A
Secondary heating	None	N/A

Primary energy use

The primary energy use for this property per year is 382 kilowatt hours per square metre (kWh/m²).

Additional information

Additional information about this property:

- Stone walls present, not insulated

How this affects your energy bills

An average household would need to spend **£1,128 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 £702 per year** if you complete the suggested steps for improving this property's energy rating.

This is **based on average costs in 2022** 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:

- 13,827 kWh per year for heating
- 2,761 kWh per year for hot water

Impact on the environment

This property's current environmental impact rating is F. 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. CO₂ harms the environment.

Carbon emissions

An average household produces 6 tonnes of CO₂

This property produces 7.5 tonnes of CO₂

This property's potential production 1.6 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. Room-in-roof insulation	£1,500 - £2,700	£255
2. Internal or external wall insulation	£4,000 - £14,000	£169
3. Floor insulation (solid floor)	£4,000 - £6,000	£54
4. Add additional 80 mm jacket to hot water cylinder	£15 - £30	£10
5. Low energy lighting	£25	£44
6. Heating controls (TRVs)	£350 - £450	£18
7. Condensing boiler	£2,200 - £3,000	£114
8. Solar water heating	£4,000 - £6,000	£38
9. Solar photovoltaic panels	£3,500 - £5,500	£373

Help paying for energy improvements

You might be able to get a grant from the [Boiler Upgrade Scheme \(https://www.gov.uk/apply-boiler-upgrade-scheme\)](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	David Walker
Telephone	02033978220
Email	hello@propcert.co.uk

Contacting the accreditation scheme

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

Accreditation scheme	Stroma Certification Ltd
Assessor's ID	STRO033788
Telephone	0330 124 9660
Email	certification@stroma.com

About this assessment

Assessor's declaration	No related party
Date of assessment	29 April 2022
Date of certificate	29 April 2022
Type of assessment	RdSAP
