

Unit B, Reading Cold Stores, Deacon Way, Reading

Commercial EPC

Carbon Emissions Calculation – Part L2a

For

Craftsman Brothers Ltd

28th April 2026

Swansea office:

Unit 14,
Axis Court,
Mallard Way,
Swansea,
SA7 0AJ

Tel: 01792 002085

E: admin@melinconsultants.co.uk

Bristol Office:

Park House,
10 Park Street,
Bristol,
BS1 5HX

Tel: 01172 356512

E: bristol@melinconsultants.co.uk

London Office:

The Department Store,
19 Bellefields Road,
London,
SW9 9UH

Tel: 02037 258399

E: london@melinconsultants.co.uk

www.melinconsultants.co.uk



A connected approach to
sustainable building solutions

Melin Consultants are accredited to provide a range of calculation, assessment and testing services. They are members of CIBSE Low Carbon Consultants.

Melin Consultants fully check all work prior to completion and a robust audit trail exists to demonstrate accountability.

All information within this document is based on evidence provided in the form of drawings and specifications.

CPD (Continual Professional Development) records are kept, and all technical staff are required to complete a minimum 20 hours per year in training activities.

Low Carbon Consultants have the expertise and necessary qualifications to offer advice in a professional capacity on matters relating to Part L of the Building Regulations and sustainability within the construction sector. This document contains the following information:

- Commercial EPC, Building Regulations Report

Project Ref: 607821

Report Date: 28th April 2026

Report author: Darren Baker

Function: Senior Consultant

Authorised by: Jamie Best

Function: Director

Energy performance certificate (EPC)

Unit B Reading Cold Store Deacon Way Reading RG30 6AZ	Energy rating A	Valid until: 27 April 2036
		Certificate number: 3820-8017-1765-5281-8315

Property type	Storage or Distribution
Total floor area	365 square metres

Rules on letting this property

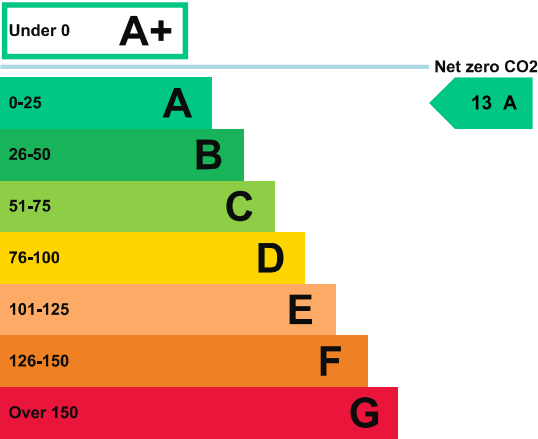
Properties can be let if they have an energy rating from A+ to E.

Energy rating and score

This property's energy rating is A.

Properties get a rating from A+ (best) to G (worst) and a score.

The better the rating and score, the lower your property's carbon emissions are likely to be.



How this property compares to others

Properties similar to this one could have ratings:

If newly built	16 A
If typical of the existing stock	65 C

Breakdown of this property's energy performance

Main heating fuel	Grid Supplied Electricity
Building environment	Air Conditioning
Assessment level	4
Building emission rate (kgCO ₂ /m ² per year)	6.1
Primary energy use (kWh/m ² per year)	64

Recommendation report

Guidance on improving the energy performance of this property can be found in the [recommendation report \(/energy-certificate/8692-3706-5909-4506-4231\)](#).

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	Darren Baker
Telephone	0845 094 1593
Email	darren@melinconsultants.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	CIBSE Certification Limited
Assessor's ID	LCEA125299
Telephone	020 8772 3649
Email	epc@cibsecertification.org

About this assessment

Employer	Melin Consultants
Employer address	Unit 14, Axis Court, Mallard Way, Swansea. SA7 0AJ
Assessor's declaration	The assessor is not related to the owner of the property.
Date of assessment	28 April 2026
Date of certificate	28 April 2026

BRUKL Output Document



Compliance with England Building Regulations Part L 2021

Project name

Unit B

As built

Date: Tue Apr 28 15:38:20 2026

Administrative information

Building Details

Address: Unit B, Reading Cold Store, Reading, RG30 6AZ

Certifier details

Name: Darren Baker

Telephone number: 0845 094 1593

Address: Melin Consultants, Unit 14, Axis Court, Swansea, SA7 0AJ

Certification tool

Calculation engine: SBEM

Calculation engine version: v6.1.e.2

Interface to calculation engine: Virtual Environment

Interface to calculation engine version: v7.0.31

BRUKL compliance module version: v6.1.e.1

Foundation area [m²]: 49.21

The CO₂ emission and primary energy rates of the building must not exceed the targets

Target CO ₂ emission rate (TER), kgCO ₂ /m ² annum	7.59
Building CO ₂ emission rate (BER), kgCO ₂ /m ² annum	6.1
Target primary energy rate (TPER), kWh _{PE} /m ² annum	81.8
Building primary energy rate (BPER), kWh _{PE} /m ² annum	64.28
Do the building's emission and primary energy rates exceed the targets?	BER ≤ TER BPER ≤ TPER

The performance of the building fabric and fixed building services should achieve reasonable overall standards of energy efficiency

Fabric element	U _{a-Limit}	U _{a-Calc}	U _{i-Calc}	First surface with maximum value
Walls*	0.26	0.22	0.26	SP000000_W-1_A0
Floors	0.18	0.16	0.16	SP000000_F
Pitched roofs	0.16	0.15	0.15	NT000001_C
Flat roofs	0.18	0.15	0.15	SP000000_C
Windows** and roof windows	1.6	1	1	SP000000_W6_O0
Rooflights***	2.2	-	-	No external rooflights
Personnel doors^	1.6	-	-	No external personnel doors
Vehicle access & similar large doors	1.3	-	-	No external vehicle access doors
High usage entrance doors	3	-	-	No external high usage entrance doors

U_{a-Limit} = Limiting area-weighted average U-values [W/(m²K)]

U_{i-Calc} = Calculated maximum individual element U-values [W/(m²K)]

U_{a-Calc} = Calculated area-weighted average U-values [W/(m²K)]

* Automatic U-value check by the tool does not apply to curtain walls whose limiting standard is similar to that for windows.

** Display windows and similar glazing are excluded from the U-value check.

*** Values for rooflights refer to the horizontal position.

^ For fire doors, limiting U-value is 1.8 W/m²K

NB: Neither roof ventilators (inc. smoke vents) nor swimming pool basins are modelled or checked against the limiting standards by the tool.

Air permeability	Limiting standard	This building
m ³ /(h.m ²) at 50 Pa	8	15*
* Buildings with less than 500 m ² total useful floor area may avoid the need for a pressure test provided that the air permeability used to calculate the BER and BPER is taken as 15 m ³ /(h.m ²) at 50 Pa.		

Building services

For details on the standard values listed below, system-specific guidance, and additional regulatory requirements, refer to the Approved Documents.

Whole building lighting automatic monitoring & targeting with alarms for out-of-range values	NO
Whole building electric power factor achieved by power factor correction	<0.9

1- AC

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.26	5.23	-	-	-
Standard value	2.5*	5	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					NO
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					

2- Water Heater unit B

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	1	-	-	-	-
Standard value	N/A	N/A	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					NO

3- Water Heater unit A

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	1	-	-	-	-
Standard value	N/A	N/A	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					NO

1- SYST0004-DHW

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	Hot water provided by HVAC system	0.015
Standard value	N/A	N/A

2- SYST0003-DHW

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	Hot water provided by HVAC system	0.015
Standard value	N/A	N/A

Zone-level mechanical ventilation, exhaust, and terminal units

ID	System type in the Approved Documents
A	Local supply or extract ventilation units
B	Zonal supply system where the fan is remote from the zone
C	Zonal extract system where the fan is remote from the zone
D	Zonal balanced supply and extract ventilation system
E	Local balanced supply and extract ventilation units
F	Other local ventilation units
G	Fan assisted terminal variable air volume units
H	Fan coil units
I	Kitchen extract with the fan remote from the zone and a grease filter
NB: Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.	

Zone name	SFP [W/(l/s)]										HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I		Zone	Standard
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1			
Unit 2 WC	0.3	-	-	-	-	-	-	-	-	-	-	N/A

Zone name	SFP [W/(l/s)]										HR efficiency	
	ID of system type	A	B	C	D	E	F	G	H	I		
Standard value		0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
Unit 2 Shower		0.3	-	-	-	-	-	-	-	-	-	N/A
Unit 2 Office		-	-	-	-	0.3	-	-	-	-	-	N/A
Unit 2 Stairs		-	-	-	-	0.3	-	-	-	-	-	N/A
Unit 2 Stairs		-	-	-	-	0.3	-	-	-	-	-	N/A

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value		95	80	0.3
Unit 2 WC		100	-	-
Unit 2 Shower		100	-	-
Unit 2		225	-	-
Unit 2 Storage		156	-	-
Unit 2 Office		100	-	-
Unit 2 Stairs		100	-	-
Unit 2 Storage		156	-	-
Unit 2 Stairs		100	-	-

The spaces in the building should have appropriate passive control measures to limit solar gains in summer

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
Unit 2	N/A	N/A
Unit 2 Office	NO (-89.5%)	NO
Unit 2 Stairs	N/A	N/A
Unit 2 Storage	NO (-93.8%)	NO
Unit 2 Stairs	NO (-76.1%)	NO

Regulation 25A: Consideration of high efficiency alternative energy systems

Were alternative energy systems considered and analysed as part of the design process?	YES
Is evidence of such assessment available as a separate submission?	NO
Are any such measures included in the proposed design?	YES

Technical Data Sheet (Actual vs. Notional Building)

Building Global Parameters

	Actual	Notional
Floor area [m ²]	365.2	365.2
External area [m ²]	1086.1	1086.1
Weather	LON	LON
Infiltration [m ³ /hm ² @ 50Pa]	15	5
Average conductance [W/K]	263.5	362.37
Average U-value [W/m ² K]	0.24	0.33
Alpha value* [%]	11.89	51.78

* Percentage of the building's average heat transfer coefficient which is due to thermal bridging

Building Use

% Area Building Type

Retail/Financial and Professional Services
 Restaurants and Cafes/Drinking Establishments/Takeaways
 Offices and Workshop Businesses
 General Industrial and Special Industrial Groups

100 Storage or Distribution

Hotels
 Residential Institutions: Hospitals and Care Homes
 Residential Institutions: Residential Schools
 Residential Institutions: Universities and Colleges
 Secure Residential Institutions
 Residential Spaces
 Non-residential Institutions: Community/Day Centre
 Non-residential Institutions: Libraries, Museums, and Galleries
 Non-residential Institutions: Education
 Non-residential Institutions: Primary Health Care Building
 Non-residential Institutions: Crown and County Courts
 General Assembly and Leisure, Night Clubs, and Theatres
 Others: Passenger Terminals
 Others: Emergency Services
 Others: Miscellaneous 24hr Activities
 Others: Car Parks 24 hrs
 Others: Stand Alone Utility Block

Energy Consumption by End Use [kWh/m²]

	Actual	Notional
Heating	4.34	7.53
Cooling	0.95	1.73
Auxiliary	0.24	0.68
Lighting	6.63	5.94
Hot water	49.74	45.15
Equipment*	31.66	31.66
TOTAL**	61.9	61.03

* Energy used by equipment does not count towards the total for consumption or calculating emissions.

** Total is net of any electrical energy displaced by CHP generators, if applicable.

Energy Production by Technology [kWh/m²]

	Actual	Notional
Photovoltaic systems	20.25	5.81
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
<i>Displaced electricity</i>	<i>20.25</i>	<i>5.81</i>

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	306.63	333.21
Primary energy [kWh _{PE} /m ²]	64.28	81.8
Total emissions [kg/m ²]	6.1	7.59

HVAC Systems Performance										
System Type	Heat dem MJ/m2	Cool dem MJ/m2	Heat con kWh/m2	Cool con kWh/m2	Aux con kWh/m2	Heat SSEFF	Cool SSEER	Heat gen SEFF	Cool gen SEER	
[ST] No Heating or Cooling										
	Actual	293.7	23.7	0	0	0	0	0	0	0
	Notional	236.2	84.5	0	0	0.1	0	0	----	----
[ST] Split or multi-split system, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	230.5	47	16.1	3.5	0.8	3.97	3.71	4.26	5.23
	Notional	265.5	101.8	27.9	6.4	2.4	2.64	4.4	----	----

Key to terms

Heat dem [MJ/m2]	= Heating energy demand
Cool dem [MJ/m2]	= Cooling energy demand
Heat con [kWh/m2]	= Heating energy consumption
Cool con [kWh/m2]	= Cooling energy consumption
Aux con [kWh/m2]	= Auxiliary energy consumption
Heat SSEFF	= Heating system seasonal efficiency (for notional building, value depends on activity glazing class)
Cool SSEER	= Cooling system seasonal energy efficiency ratio
Heat gen SSEFF	= Heating generator seasonal efficiency
Cool gen SSEER	= Cooling generator seasonal energy efficiency ratio
ST	= System type
HS	= Heat source
HFT	= Heating fuel type
CFT	= Cooling fuel type