

Unit 15, Greatforth Park, Greatforth
Commercial EPC
Carbon Emissions Calculation – Part L2a

For

Warwick Burt Construction Ltd
15th August 2025

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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: 607614

Report Date: 15th August 2025

Report author: Darren Baker

Function: Senior Consultant

Authorised by: Jamie Best

Function: Director

Energy performance certificate (EPC)

Unit 15 Greatworth Park Welsh Lane Greatforth OX17 2HB	Energy rating	Valid until: 14 August 2035
	A	Certificate number: 4371-3223-0934-8627-5872

Property type	Storage or Distribution
Total floor area	380 square metres

Rules on letting this property

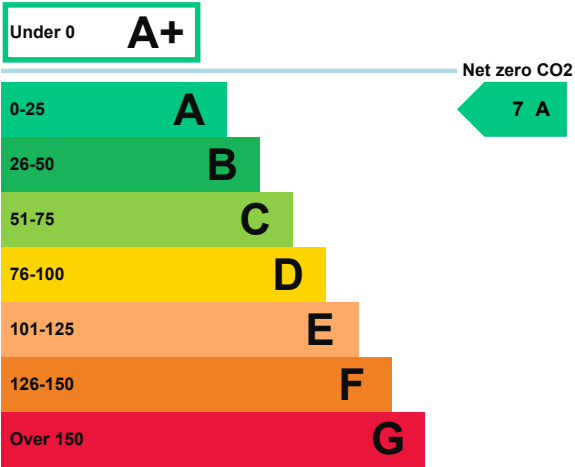
Properties can be let if they have an energy rating from A+ to E.

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	13 A
If typical of the existing stock	52 C

Breakdown of this property's energy performance

Main heating fuel	Grid Supplied Electricity
Building environment	Heating and Mechanical Ventilation
Assessment level	5
Building emission rate (kgCO ₂ /m ² per year)	0.67
Primary energy use (kWh/m ² per year)	6

Recommendation report

Guidance on improving the energy performance of this property can be found in the [recommendation report \(/energy-certificate/6759-2484-9283-2944-6617\)](/energy-certificate/6759-2484-9283-2944-6617).

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, Swansea, SA7 0AJ
Assessor's declaration	The assessor is not related to the owner of the property.
Date of assessment	15 August 2025
Date of certificate	15 August 2025

Project name

Unit 15

As built

Date: Fri Aug 15 15:11:30 2025

Administrative information

Building Details

Address: Unit 15, Greatforth, OX17 2HB

Certifier details

Name: Darren Baker

Telephone number: Phone

Address: Street Address, City, Postcode

Certification tool

Calculation engine: Apache

Calculation engine version: 7.0.28

Interface to calculation engine: IES Virtual Environment

Interface to calculation engine version: 7.0.28

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

Foundation area [m²]: 15.58The 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	1.32
Building CO ₂ emission rate (BER), kgCO ₂ /m ² annum	0.67
Target primary energy rate (TPER), kWh _{PE} /m ² annum	13.68
Building primary energy rate (BPER), kWh _{PE} /m ² annum	5.56
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	0.26	0.26	SP000000:Surf[1]
Floors	0.18	0.18	0.18	SP000000:Surf[18]
Pitched roofs	0.16	-	-	No pitched roofs in building
Flat roofs	0.18	0.18	0.18	SP000000:Surf[2]
Windows** and roof windows	1.6	1.6	1.6	SP000000:Surf[14]
Rooflights***	2.2	1.61	1.61	SP000000:Surf[3]
Personnel doors [^]	1.6	1.6	1.6	SP000000:Surf[0]
Vehicle access & similar large doors	1.3	-	-	No vehicle access doors in building
High usage entrance doors	3	-	-	No high usage entrance doors in building

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	5

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- Main system

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	1	-	0.2	-	-
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- Main system

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	1	-
Standard value	1	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		
Shower and WC		-	-	0.4	-	-	-	-	-	-	-	N/A

Zone name	General lighting and display lighting	General luminaire	Display light source	
	ID of system type	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
Warehouse		149	-	-
Mezzanine		149	-	-
Lobby		129	129	1.047
Shower and WC		129	-	-

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?
Warehouse	YES (+98%)	NO
Mezzanine	YES (+134.9%)	NO
Lobby	YES (+89.7%)	NO

Regulation 25A: Consideration of high efficiency alternative energy systems

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

Technical Data Sheet (Actual vs. Notional Building)

Building Global Parameters

	Actual	Notional
Floor area [m ²]	380.3	380.3
External area [m ²]	1196.9	1196.9
Weather	SWI	SWI
Infiltration [m ³ /hm ² @ 50Pa]	5	5
Average conductance [W/K]	384.33	392.81
Average U-value [W/m ² K]	0.32	0.33
Alpha value* [%]	25	10

* 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	8.07	3.81
Cooling	0	0
Auxiliary	0.04	0.03
Lighting	6.88	3.95
Hot water	4.55	3.91
Equipment*	29.36	29.36
TOTAL**	19.54	11.7

* 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	16.52	2.63
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
<i>Displaced electricity</i>	<i>16.52</i>	<i>2.63</i>

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	23.25	19.33
Primary energy [kWh _{PE} /m ²]	5.56	13.68
Total emissions [kg/m ²]	0.67	1.32

HVAC Systems Performance

System Type	Heat dem MJ/m ²	Cool dem MJ/m ²	Heat con kWh/m ²	Cool con kWh/m ²	Aux con kWh/m ²	Heat SSEFF	Cool SSEER	Heat gen SEFF	Cool gen SEER
[ST] Other local room heater - unfanned, [HS] Direct or storage electric heater, [HFT] Electricity, [CFT] Electricity									
Actual	567.7	0	197.1	0	0.9	0.8	0	1	0
Notional	471.9	0	92.9	0	0.8	1.41	0	----	----
[ST] No Heating or Cooling									
Actual	0	0	0	0	0	0	0	0	0
Notional	0	0	0	0	0	0	0	----	----

Key to terms

Heat dem [MJ/m ²]	= Heating energy demand
Cool dem [MJ/m ²]	= Cooling energy demand
Heat con [kWh/m ²]	= Heating energy consumption
Cool con [kWh/m ²]	= Cooling energy consumption
Aux con [kWh/m ²]	= 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