

Project name

Phoenix Buildings

As designed

Date: Tue Jul 22 14:21:56 2025

Administrative information

Building Details

Address: Phoenix Buildings, Heywood Road, Prestwich, Manchester, M25 1FN

Certifier details

Name: Focus360Energy

Telephone number:

Address: , , -

Certification tool

Calculation engine: SBEM

Calculation engine version: v6.1.e.0

Interface to calculation engine: iSBEM

Interface to calculation engine version: v6.1.e

BRUKL compliance module version: v6.1.e.0

Foundation area [m²]: 127.5

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

Target CO ₂ emission rate (TER), kgCO ₂ /m²·annum	11.87
Building CO ₂ emission rate (BER), kgCO ₂ /m²·annum	10.48
Target primary energy rate (TPER), kWh _{PE} /m²·annum	60.5
Building primary energy rate (BPER), kWh _{PE} /m²·annum	57.36
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	0.18	0.18	Male WC/w
Floors	0.18	0.16	0.19	Female WC/f
Pitched roofs	0.16	0.25	0.25	Male WC/c
Flat roofs	0.18	-	-	No heat loss flat roofs
Windows** and roof windows	1.6	1.6	1.6	Office 01/ne/g
Rooflights***	2.2	-	-	No external rooflights
Personnel doors^	1.6	1	1	New Glazed 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_a-Calc = Calculated area-weighted average U-values [W/(m²K)] U_i-Calc = Calculated maximum individual element 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
m³/(h.m²) 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	YES
Whole building electric power factor achieved by power factor correction	<0.9

1- Main Space Heating

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	0.8	-	-	-	-
Standard value	0.93*	N/A	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
* Standard shown is for gas single boiler systems <=2 MW output and overall for multi-boiler systems. For single boiler systems >2 MW or any individual boiler in a multi-boiler system, limiting efficiency is 0.88.					

1- ASHP HWS

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	Hot water provided by HVAC system	0.009
Standard value	N/A	N/A

"No zones in project where local mechanical ventilation, exhaust, or terminal unit is applicable"

"LENI calculation for lighting energy provided in a separate submission."

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?
Office 01	NO (-22.7%)	NO
Office 02	NO (-22.7%)	NO
Open Office	N/A	N/A
Filing	N/A	N/A
Open Office FF	NO (-49.2%)	NO
Private Office FF	NO (-26.4%)	YES

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			Building Use	
	Actual	Notional	% Area	Building Type
Floor area [m²]	193	193	100	Retail/Financial and Professional Services
External area [m²]	502.2	502.2		Restaurants and Cafes/Drinking Establishments/Takeaways
Weather	MAN	MAN		Offices and Workshop Businesses
Infiltration [m³/hm²@ 50Pa]	5	3		General Industrial and Special Industrial Groups
Average conductance [W/K]	136.24	212.18		Storage or Distribution
Average U-value [W/m²K]	0.27	0.42		Hotels
Alpha value* [%]	6.1	23.78		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	32.93	45.19
Cooling	0	0
Auxiliary	7.57	9.18
Lighting	43.69	6.65
Hot water	13.22	14.75
Equipment*	36.15	36.15
TOTAL **	97.41	75.77

* 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	48.96	21.06
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
<i>Displaced electricity</i>	<i>48.96</i>	<i>21.06</i>

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m²]	197.7	201.01
Primary energy [kWh _{PE} /m²]	57.36	60.5
Total emissions [kg/m²]	10.48	11.87

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 SSEF	Cool SSEER	Heat gen SEFF	Cool gen SEER	
[ST] Central heating using water: radiators, [HS] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity										
	Actual	89	108.7	32.9	0	7.6	0.75	0	0.8	0
	Notional	139.9	61.1	45.2	0	5	0.86	0	----	----

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