

Project name

P2197 - 185 Manchester Road Rochdale**As designed****Date:** Fri Jun 20 11:05:49 2025

Administrative information

Building Details

Address: 185 Manchester Road, Rochdale,

Certifier details

Name: Cairn Pearson**Telephone number:** 0113 257 7300**Address:** 7 Feast Field, Horsforth, Leeds, LS18 4TJ

Certification tool

Calculation engine: Apache**Calculation engine version:** 7.0.29**Interface to calculation engine:** IES Virtual Environment**Interface to calculation engine version:** 7.0.29**BRUKL compliance module version:** v6.1.e.1**Foundation area [m²]:** 606.39The 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	7.24
Building CO ₂ emission rate (BER), kgCO ₂ /m ² annum	6.76
Target primary energy rate (TPER), kWh _{PE} /m ² annum	79.12
Building primary energy rate (BPER), kWh _{PE} /m ² annum	73.02
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	0.14	0.16	SP000000:Surf[2]
Floors	0.18	0.12	0.13	SP000000:Surf[0]
Pitched roofs	0.16	0.11	0.11	SP0000E1:Surf[2]
Flat roofs	0.18	0.11	0.11	SP0000AB:Surf[0]
Windows** and roof windows	1.6	1.3	1.3	SP000000:Surf[1]
Rooflights***	2.2	1.4	1.4	TF000003:Surf[2]
Personnel doors^	1.6	-	-	No personnel doors in building
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	3

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	>0.95

1- Corridor HVAC

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	2.82	-	0.2	-	-
Standard value	2.5*	N/A	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- VRF

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.42	5.44	0	-	0.85
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.					

3- Panel Heaters

	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

4- ASHP HIU

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	2.82	-	0.2	-	0.85
Standard value	2.5*	N/A	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.					

"No HWS in project, or hot water is provided by HVAC system"

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		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
GF - Main Dining	-	-	-	1	-	-	-	-	-	-	N/A
GF - WC	-	-	0.3	-	-	-	-	-	-	-	N/A
GF - Medical Room	-	1	-	-	-	-	-	-	-	-	N/A
GF - Laundry Room	-	1	-	-	-	-	-	-	-	-	N/A
GF - Hairdressers	-	1	-	-	-	-	-	-	-	-	N/A
GF - Prayer Room	-	-	-	1	-	-	-	-	-	-	N/A
GF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
GF - Respite Room	-	-	-	0.9	-	-	-	-	-	-	N/A
GF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
GF - Respite Room	-	-	-	0.9	-	-	-	-	-	-	N/A
GF - Respite Room	-	-	-	0.9	-	-	-	-	-	-	N/A
GF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
GF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
GF - Respite Room	-	-	-	0.9	-	-	-	-	-	-	N/A
GF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
GF - Respite Room	-	-	-	0.9	-	-	-	-	-	-	N/A
GF - WC	-	-	0.3	-	-	-	-	-	-	-	N/A
GF - Security Office	-	1	-	-	-	-	-	-	-	-	N/A
GF - Guest WC	-	-	0.3	-	-	-	-	-	-	-	N/A
GF - Shower/Changing	-	-	0.3	-	-	-	-	-	-	-	N/A
GF - Shower/Changing	-	-	0.3	-	-	-	-	-	-	-	N/A
GF - Staff Room	-	-	-	1	-	-	-	-	-	-	N/A
GF - Reception	-	-	-	1	-	-	-	-	-	-	N/A
FF - Dementia Lounge	-	-	-	1	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Staff Room	-	-	-	1	-	-	-	-	-	-	N/A
FF - Shower/Changing	-	-	0.3	-	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	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
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Assisted Dementia Lounge	-	-	-	1	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Dementia Room	-	-	-	0.9	-	-	-	-	-	-	N/A
FF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Nursing Room	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Nursing Room	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Nursing Room	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Nursing Room	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Nursing Room	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Nursing Room	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Nursing Room	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Nursing Room	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Ensuite	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Nursing Room	-	-	-	0.9	-	-	-	-	-	-	N/A
SF - Nursing Room	-	-	-	0.9	-	-	-	-	-	-	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
GF - Store		91	-	-
GF - Corridor		130	-	-
GF - Main Dining		138	-	-
GF - Plant Room		105	-	-
GF - WC		125	-	-
GF - Sluice		104	-	-
GF - Medical Room		99	-	-
GF - Laundry Room		127	-	-
GF - Hairdressers		107	-	-
GF - Prayer Room		132	-	-
GF - Stairs		100	-	-
GF - Ensuite		129	-	-
GF - Respite Room		103	-	-
GF - Ensuite		124	-	-
GF - Respite Room		105	-	-
GF - Cleaners Cupboard		99	-	-
GF - Corridor		103	-	-
GF - Respite Room		103	-	-
GF - Ensuite		133	-	-
GF - Ensuite		133	-	-
GF - Respite Room		103	-	-
GF - Ensuite		134	-	-
GF - Respite Room		101	-	-
GF - Corridor		97	-	-
GF - Bin Store		126	-	-
GF - Store		105	-	-
GF - WC		141	-	-
GF - Corridor		106	-	-
GF - Stair		101	-	-
GF - Main Kitchen		104	-	-
GF - Stairs		102	-	-
GF - Security Office		128	-	-
GF - Guest WC		118	-	-
GF - Shower/Changing		141	-	-
GF - Shower/Changing		152	-	-
GF - Staff Room		108	-	-
GF - Lift Lobby		102	-	-
GF - Corridor		110	-	-
GF - Reception		108	85	1.588
FF - Store		108	-	-
FF - Corridor		103	-	-
FF - Corridor		99	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
FF - Corridor		105	-	-
FF - Dementia Lounge		103	-	-
FF - Corridor		104	-	-
FF - Corridor		98	-	-
FF - Stairs		101	-	-
FF - Ensuite		140	-	-
FF - Dementia Room		102	-	-
FF - Ensuite		138	-	-
FF - Dementia Room		103	-	-
FF - Corridor		102	-	-
FF - Dementia Room		102	-	-
FF - Ensuite		121	-	-
FF - Ensuite		123	-	-
FF - Dementia Room		104	-	-
FF - Dementia Room		105	-	-
FF - Ensuite		128	-	-
FF - Staff Room		116	-	-
FF - Shower/Changing		139	-	-
FF - Stairs		100	-	-
FF - Ensuite		125	-	-
FF - Dementia Room		104	-	-
FF - Ensuite		130	-	-
FF - Dementia Room		106	-	-
FF - Corridor		108	-	-
FF - Corridor		110	-	-
FF - Ensuite		123	-	-
FF - Dementia Room		102	-	-
FF - Dementia Room		103	-	-
FF - Ensuite		120	-	-
FF - Ensuite		123	-	-
FF - Dementia Room		100	-	-
FF - Stairs		101	-	-
FF - Dementia Room		103	-	-
FF - Ensuite		124	-	-
FF - Dementia Room		104	-	-
FF - Ensuite		132	-	-
FF - Dementia Room		106	-	-
FF - Ensuite		135	-	-
FF - Dementia Room		106	-	-
FF - Ensuite		134	-	-
FF - Dementia Room		106	-	-
FF - Ensuite		135	-	-
FF - Assisted Dementia Lounge		128	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
FF - Ensuite		128	-	-
FF - Dementia Room		106	-	-
FF - Ensuite		128	-	-
FF - Ensuite		131	-	-
FF - Dementia Room		106	-	-
FF - Dementia Room		107	-	-
FF - Ensuite		132	-	-
FF - Dementia Room		105	-	-
FF - Stairs		102	-	-
FF - Ensuite		125	-	-
FF - Dementia Room		104	-	-
FF - Dementia Room		119	-	-
FF - Ensuite		127	-	-
SF - Nursing Room		103	-	-
SF - Ensuite		127	-	-
SF - Nursing Room		105	-	-
SF - Ensuite		132	-	-
SF - Ensuite		130	-	-
SF - Ensuite		129	-	-
SF - Nursing Room		104	-	-
SF - Nursing Room		104	-	-
SF - Ensuite		128	-	-
SF - Nursing Room		105	-	-
SF - Ensuite		127	-	-
SF - Nursing Room		104	-	-
SF - Nursing Room		104	-	-
SF - Ensuite		130	-	-
SF - Corridor		105	-	-
SF - Nursing Room		104	-	-
SF - Ensuite		125	-	-
SF - Nursing Room		105	-	-
SF - Ensuite		132	-	-
SF - Stairs		101	-	-
SF - Assisted Nursing Bathroom		116	-	-
SF - Nursing Room		106	-	-
SF - Ensuite		128	-	-
SF - Nursing Room		104	-	-
SF - Ensuite		130	-	-
SF - Corridor		99	-	-
SF - Corridor		104	-	-
SF - Stairs		101	-	-
SF - Ensuite		123	-	-
SF - Ensuite		128	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
SF - Nursing Room		104	-	-
SF - Ensuite		130	-	-
SF - Nursing Room		105	-	-
SF - Ensuite		126	-	-
SF - Nursing Room		103	-	-
SF - Ensuite		122	-	-
SF - Nursing Room		103	-	-
SF - Ensuite		127	-	-
SF - Nursing Room		104	-	-
SF - Nursing Room		104	-	-
SF - Ensuite		128	-	-
SF - Ensuite		125	-	-
SF - Nursing Room		104	-	-
SF - Corridor		105	-	-
SF - Corridor		99	-	-
SF - Corridor		109	-	-
SF - Ensuite		136	-	-
SF - Ensuite		137	-	-
SF - Nursing Room		103	-	-
SF - Nursing Room		103	-	-
SF - Ensuite		128	-	-
SF - Ensuite		124	-	-
SF - Nursing Room		101	-	-
SF - Nursing Room		101	-	-
SF - Nursing Room		105	-	-
SF - Ensuite		121	-	-
TF - Ensuite		160	-	-
TF - Ensuite		158	-	-
TF - Ensuite		163	-	-
TF - Ensuite		166	-	-
TF - Ensuite		164	-	-
TF - Ensuite		167	-	-
TF - Ensuite		163	-	-
TF - Ensuite		166	-	-
TF - Ensuite		160	-	-
TF - Corridor		107	-	-
TF - Ensuite		159	-	-
TF - Ensuite		155	-	-
TF - Ensuite		148	-	-
TF - Nursing Room		115	-	-
TF - Ensuite		162	-	-
TF - Ensuite		155	-	-
TF - Nursing Room		118	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
TF - Ensuite		156	-	-
TF - Ensuite		157	-	-
TF - Ensuite		161	-	-
TF - Ensuite		180	-	-
TF - Ensuite		181	-	-
TF - Nursing Room		114	-	-
TF - Ensuite		152	-	-
TF - Nursing Room		113	-	-
TF - Ensuite		147	-	-
SF - Stairs		105	-	-
SF - Stairs		104	-	-
SF - Corridor		106	-	-
SF - Nursing Room		104	-	-
TF - Nursing Room		110	-	-
TF - Ensuite		109	-	-
TF - Stairs		113	-	-
TF - Nursing Room		118	-	-
TF - Corridor		119	-	-
TF - Ensuite		107	-	-
TF - Nursing Room		93	-	-
TF - Corridor		121	-	-
TF - Stairs		112	-	-
TF - Nursing Room		128	-	-
TF - Corridor		115	-	-
TF - Corridor		105	-	-
TF - Nursing Room		116	-	-
TF - Nursing Room		113	-	-
TF - Nursing Room		111	-	-
TF - Assisted Nursing Bathroom		95	-	-
TF - Nursing Room		117	-	-
TF - Stairs		125	-	-
TF - Corridor		115	-	-
TF - Nursing Room		111	-	-
TF - Nursing Room		116	-	-
TF - Nursing Room		115	-	-
TF - Nursing Room		115	-	-
TF - Nursing Room		115	-	-
TF - Nursing Room		113	-	-
TF - Nursing Room		111	-	-
TF - Nursing Room		115	-	-
TF - Nursing Room		121	-	-
TF - Stairs		119	-	-
TF - Nursing Room		114	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
TF - Corridor		113	-	-
GF - Visitor Cafe		112	-	-
GF - Visitor Lounge		139	-	-
SF - Nursing Open Lounge		108	-	-
SF - Sluice		132	-	-
SF - Medical Room		105	-	-
TF - Nursing Open Lounge		112	-	-
TF - Sluice		174	-	-
TF - Medical Room		122	-	-
TF - Nursing Room		113	-	-
TF - Nursing Room		117	-	-

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?
GF - Main Dining	NO (-27.9%)	NO
GF - Medical Room	NO (-56%)	NO
GF - Hairdressers	NO (-59.8%)	NO
GF - Prayer Room	NO (-40.6%)	NO
GF - Respite Room	NO (-34.2%)	NO
GF - Respite Room	NO (-35%)	NO
GF - Respite Room	NO (-60.2%)	NO
GF - Respite Room	NO (-49.1%)	NO
GF - Respite Room	NO (-78.8%)	NO
GF - Security Office	N/A	N/A
GF - Staff Room	NO (-81.2%)	NO
GF - Reception	YES (+18.6%)	NO
FF - Dementia Lounge	YES (+39.7%)	NO
FF - Dementia Room	NO (-20%)	NO
FF - Dementia Room	NO (-17.1%)	NO
FF - Dementia Room	NO (-77.9%)	NO
FF - Dementia Room	NO (-46.5%)	NO
FF - Dementia Room	NO (-56.2%)	NO
FF - Staff Room	NO (-61.1%)	NO
FF - Dementia Room	NO (-21%)	NO
FF - Dementia Room	NO (-14.9%)	NO
FF - Dementia Room	NO (-45.4%)	NO
FF - Dementia Room	NO (-57.9%)	NO
FF - Dementia Room	NO (-78.5%)	NO
FF - Dementia Room	NO (-4%)	NO
FF - Dementia Room	NO (-39%)	NO
FF - Dementia Room	NO (-14.1%)	NO
FF - Dementia Room	NO (-14.7%)	NO
FF - Dementia Room	NO (-65.4%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
FF - Assisted Dementia Lounge	N/A	N/A
FF - Dementia Room	NO (-16%)	NO
FF - Dementia Room	NO (-15.6%)	NO
FF - Dementia Room	NO (-65.6%)	NO
FF - Dementia Room	NO (-15.3%)	NO
FF - Dementia Room	NO (-72%)	NO
FF - Dementia Room	NO (-70.9%)	NO
SF - Nursing Room	NO (-22.2%)	NO
SF - Nursing Room	NO (-66.3%)	NO
SF - Nursing Room	NO (-17.6%)	NO
SF - Nursing Room	NO (-19.2%)	NO
SF - Nursing Room	NO (-66.5%)	NO
SF - Nursing Room	NO (-19%)	NO
SF - Nursing Room	NO (-18.6%)	NO
SF - Nursing Room	NO (-43.6%)	NO
SF - Nursing Room	NO (-39%)	NO
SF - Nursing Room	NO (-37.7%)	NO
SF - Nursing Room	NO (-39.1%)	NO
SF - Nursing Room	NO (-21.2%)	NO
SF - Nursing Room	NO (-18.1%)	NO
SF - Nursing Room	NO (-43.9%)	NO
SF - Nursing Room	NO (-58%)	NO
SF - Nursing Room	NO (-14.9%)	NO
SF - Nursing Room	NO (-14.1%)	NO
SF - Nursing Room	YES (+52.7%)	NO
SF - Nursing Room	NO (-18.3%)	NO
SF - Nursing Room	NO (-17.9%)	NO
SF - Nursing Room	NO (-78.1%)	NO
SF - Nursing Room	NO (-47.4%)	NO
SF - Nursing Room	NO (-57.8%)	NO
TF - Nursing Room	NO (-66.6%)	NO
TF - Nursing Room	NO (-18.1%)	NO
TF - Nursing Room	NO (-19.9%)	NO
TF - Nursing Room	NO (-68.2%)	NO
SF - Nursing Room	NO (-77.8%)	NO
TF - Nursing Room	NO (-85.3%)	NO
TF - Nursing Room	NO (-63.8%)	NO
TF - Nursing Room	NO (-85.2%)	NO
TF - Nursing Room	NO (-66.8%)	NO
TF - Nursing Room	YES (+59.3%)	NO
TF - Nursing Room	NO (-17.7%)	NO
TF - Nursing Room	NO (-19%)	NO
TF - Nursing Room	NO (-16.7%)	NO
TF - Nursing Room	NO (-60.7%)	NO
TF - Nursing Room	NO (-5%)	NO
TF - Nursing Room	NO (-4.2%)	NO
TF - Nursing Room	NO (-4.9%)	NO
TF - Nursing Room	NO (-5.5%)	NO
TF - Nursing Room	NO (-8.3%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
TF - Nursing Room	NO (-60.2%)	NO
TF - Nursing Room	YES (+4.7%)	NO
TF - Nursing Room	NO (-53.9%)	NO
TF - Nursing Room	NO (-57.9%)	NO
GF - Visitor Lounge	NO (-2%)	NO
SF - Nursing Open Lounge	NO (-67.3%)	NO
SF - Medical Room	N/A	N/A
TF - Nursing Open Lounge	NO (-71.3%)	NO
TF - Medical Room	N/A	N/A
TF - Nursing Room	NO (-62.3%)	NO
TF - Nursing Room	NO (-57.5%)	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]	2813.6	2813.6
External area [m ²]	3666.8	3835.5
Weather	MAN	MAN
Infiltration [m ³ /hm ² @ 50Pa]	3	3
Average conductance [W/K]	999.34	1384.43
Average U-value [W/m ² K]	0.27	0.36
Alpha value* [%]	27.9	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
 Storage or Distribution
 Hotels

100 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	5.95	6.99
Cooling	2.42	1.98
Auxiliary	9.47	5.3
Lighting	8.93	12.05
Hot water	25.8	26.86
Equipment*	59.56	59.56
TOTAL **	52.57	53.19

* 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	3.24	0.39
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
<i>Displaced electricity</i>	<i>3.24</i>	<i>0.39</i>

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	86.82	99.51
Primary energy [kWh _{PE} /m ²]	73.02	79.12
Total emissions [kg/m ²]	6.76	7.24

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] Central heating using water: radiators, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	199.6	0	22	0	5.3	2.52	0	2.82	0	
Notional	237.2	0	24.9	0	2.5	2.65	0	----	----	
[ST] Split or multi-split system, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	5	226.7	0.4	16.3	12	3.19	3.86	3.42	5.44	
Notional	1.2	222.2	0.1	13.3	4.4	2.78	4.63	----	----	
[ST] Central heating using water: radiators, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	24.6	0	2.7	0	12.5	2.52	0	2.82	0	
Notional	38.6	0	4	0	5.2	2.65	0	----	----	
[ST] Other local room heater - unfanned, [HS] Direct or storage electric heater, [HFT] Electricity, [CFT] Electricity										
Actual	8.6	0	3	0	12.3	0.8	0	1	0	
Notional	4.7	0	0.9	0	16.3	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/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