

Project name

Care Home - Energy Efficiency

As designed

Date: Thu Mar 26 11:39:28 2026

Administrative information

Building Details

Address: Former Co-op Store, Mill Street, CALNE, SN11 0HT

Certifier details

Name: Jordan Howlett

Telephone number: 01242 506150

Address: Ground Floor Park Court Knapp Lane, Cheltenham, GL50 3QJ

Certification tool

Calculation engine: SBEM

Calculation engine version: v6.1.e.2

Interface to calculation engine: DesignBuilder SBEM

Interface to calculation engine version: v7.3.1

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

Foundation area [m²]: 1023.11The 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	36.72
Building CO ₂ emission rate (BER), kgCO ₂ /m ² annum	24.16
Target primary energy rate (TPER), kWh _{PE} /m ² annum	398.36
Building primary energy rate (BPER), kWh _{PE} /m ² annum	261.52
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	Block 00 - B08 - Basement Corridor_P_9
Floors	0.18	0.11	0.18	Block 01 - 007 - Suite G20_F_4
Pitched roofs	0.16	0.16	0.16	Block 21 - 201 - Suite G52_R_16
Flat roofs	0.18	0.18	0.18	Block 02 - 018 - Street_R_5
Windows** and roof windows	1.6	1.6	1.6	Block 00 - B01 - Kitchen_G_6
Rooflights***	2.2	-	-	No external rooflights
Personnel doors^	1.6	1.6	1.6	Block 00 - B02 - Escape Corridor_D_9
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	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	NO
Whole building electric power factor achieved by power factor correction	<0.9

1- ASHP

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.24	-	-	-	-
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.					

1- DHW

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	2	0.012
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		
Block 00 - B01 - Kitchen		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 00 - B05 - Female Showers		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 00 - B06 - Female WCs		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 00 - B15 - Laundry		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 00 - B13 - Male Showers		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 00 - B12 - Male WCs		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 01 - 003 - Suite G16		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 01 - 004 - Suite G17		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 01 - 006 - Suite G19		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 01 - 007 - Suite G20		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 01 - 008 - Suite G21		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 01 - 001 - Suite G15		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 01 - 012 - Accessible WC		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 032 - Suite G05		-	-	0.5	-	-	-	-	-	-	-	N/A

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		
Block 03 - 033 - Suite G06	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 035 - Suite G07	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 030 - Suite G04	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 049 - Suite G12	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 036 - Suite G08	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 028 - Suite G03	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 047 - Suite G13	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 050 - Suite G11	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 046 - Suite G14	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 027 - Suite G02	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 038 - Suite G08	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 025 - Suite G01	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 133 - Suite G31	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 134 - Suite G32	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 136 - Suite G33	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 131 - Suite G30	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 148 - Suite G37	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 137 - Suite G34	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 129 - Suite G29	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 146 - Suite G38	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 149 - Suite G36	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 145 - Suite G39	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 128 - Suite G28	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 143 - Suite G40	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 126 - Suite G27	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 142 - Suite G41	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 124 - Suite G26	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 123 - Suite G25	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 141 - Suite G42	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 122 - Suite G24	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 121 - Suite G23	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 120 - Suite G22	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 103 - Suite G44	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 104 - Suite G45	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 105 - Suite G46	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 106 - Suite G47	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 107 - Suite G48	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 108 - Suite G49	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 101 - Suite G43	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 115 - Suite G51	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 113 - Suite G50	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 112 - Accessible WC	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 202 - Suite G53	-	-	0.5	-	-	-	-	-	-	-	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
Block 21 - 201 - Suite G52	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 207 - Suite G58	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 203 - Suite G54	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 204 - Suite G55	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 213 - Suite G60	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 206 - Suite G57	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 205 - Suite G56	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 211 - Accessible WC	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 212 - Suite G59	-	-	0.5	-	-	-	-	-	-	-	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
Block 00 - B08 - Basement Corridor		120	-	-
Block 00 - B02 - Escape Corridor		120	-	-
Block 00 - B01 - Kitchen		120	-	-
Block 00 - B03 - Training Room		120	-	-
Block 00 - B04 - Staff Rest		120	-	-
Block 00 - B05 - Female Showers		120	-	-
Block 00 - B06 - Female WCs		120	-	-
Block 00 - B09 - Escape Stair		120	-	-
Block 00 - B15 - Laundry		120	-	-
Block 00 - B10 - Lift Lobby		120	-	-
Block 00 - B14 - Stores		120	-	-
Block 00 - B13 - Male Showers		120	-	-
Block 00 - B12 - Male WCs		120	-	-
Block 00 - B11 - Lifts		120	-	-
Block 01 - 002 - Service Lift		120	-	-
Block 01 - 003 - Suite G16		120	-	-
Block 01 - 014 - Block 1 Corridor		120	-	-
Block 01 - 004 - Suite G17		120	-	-
Block 01 - 006 - Suite G19		120	-	-
Block 01 - 007 - Suite G20		120	-	-
Block 01 - 008 - Suite G21		120	-	-
Block 01 - 009 - Service Stair		120	-	-
Block 01 - 001 - Suite G15		120	-	-
Block 01 - 017 - Escape Stair		120	-	-
Block 01 - 010 - Lift Lobby		120	-	-
Block 01 - 016 - Cinema		120	-	-
Block 01 - 015 - Social		120	-	-
Block 01 - 013 - Linen Store		120	-	-
Block 01 - 011 - Lifts		120	-	-
Block 01 - 012 - Accessible WC		120	-	-

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	
Block 03 - 032 - Suite G05		120	-	-	
Block 03 - 033 - Suite G06		120	-	-	
Block 03 - 029 - Block 2 Corridor 3		120	-	-	
Block 03 - 031 - Escape Stair		120	-	-	
Block 03 - 035 - Suite G07		120	-	-	
Block 03 - 030 - Suite G04		120	-	-	
Block 03 - 048 - SPA		120	-	-	
Block 03 - 049 - Suite G12		120	-	-	
Block 03 - 034 - Block 2 Corridor 4		120	-	-	
Block 03 - 036 - Suite G08		120	-	-	
Block 03 - 037 - Residents Dining		120	-	-	
Block 03 - 028 - Suite G03		120	-	-	
Block 03 - 047 - Suite G13		120	-	-	
Block 03 - 050 - Suite G11		120	-	-	
Block 03 - 024 - Block 2 Corridor 2		120	-	-	
Block 03 - 046 - Suite G14		120	-	-	
Block 03 - 027 - Suite G02		120	-	-	
Block 03 - 026 - Escape Stair		120	-	-	
Block 03 - 045 - Sluice		120	-	-	
Block 03 - 044 - Store		120	-	-	
Block 03 - 038 - Suite G08		120	-	-	
Block 03 - 025 - Suite G01		120	-	-	
Block 03 - 023 - Therapy Room		120	-	-	
Block 03 - 019 - Block 2 Corridor 1		120	-	-	
Block 03 - 043 - Residents Sitting Room		120	-	-	
Block 03 - 042 - Residents Sitting Room		120	-	-	
Block 03 - 039 - Family Room		120	-	-	
Block 03 - 022 - Hairdresser		120	120	1.25	
Block 03 - 041 - Nurse Office		120	-	-	
Block 03 - 021 - Cafe		120	-	-	
Block 03 - 040 - Reception		120	120	1.125	
Block 03 - 020 - Shop		120	120	1.25	
Block 02 - 018 - Street		120	-	-	
Block 14 - 133 - Suite G31		120	-	-	
Block 14 - 134 - Suite G32		120	-	-	
Block 14 - 130 - Block 14 Corridor 3		120	-	-	
Block 14 - 132 - Escape Stair		120	-	-	
Block 14 - 136 - Suite G33		120	-	-	
Block 14 - 131 - Suite G30		120	-	-	
Block 14 - 147 - SPA		120	-	-	
Block 14 - 148 - Suite G37		120	-	-	
Block 14 - 135 - Block 14 Corridor 4		120	-	-	
Block 14 - 137 - Suite G34		120	-	-	

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
Block 14 - 138 - Residents Dining		120		-	-
Block 14 - 129 - Suite G29		120		-	-
Block 14 - 146 - Suite G38		120		-	-
Block 14 - 149 - Suite G36		120		-	-
Block 14 - 125 - Block 14 Corridor 2		120		-	-
Block 14 - 145 - Suite G39		120		-	-
Block 14 - 128 - Suite G28		120		-	-
Block 14 - 127 - Escape Stair		120		-	-
Block 14 - 144 - Hoist Store		120		-	-
Block 14 - 143 - Suite G40		120		-	-
Block 14 - 139 - Nurse Office		120		-	-
Block 14 - 126 - Suite G27		120		-	-
Block 14 - 142 - Suite G41		120		-	-
Block 14 - 140 - Social Room		120		-	-
Block 14 - 124 - Suite G26		120		-	-
Block 14 - 118 - Block 14 Corridor 1		120		-	-
Block 14 - 123 - Suite G25		120		-	-
Block 14 - 141 - Suite G42		120		-	-
Block 14 - 122 - Suite G24		120		-	-
Block 14 - 121 - Suite G23		120		-	-
Block 14 - 119 - Cleaners Store		120		-	-
Block 14 - 120 - Suite G22		120		-	-
Block 11 - 102 - Service Lift		120		-	-
Block 11 - 103 - Suite G44		120		-	-
Block 11 - 114 - Block 11 Corridor		120		-	-
Block 11 - 104 - Suite G45		120		-	-
Block 11 - 105 - Suite G46		120		-	-
Block 11 - 106 - Suite G47		120		-	-
Block 11 - 107 - Suite G48		120		-	-
Block 11 - 108 - Suite G49		120		-	-
Block 11 - 109 - Service Stair		120		-	-
Block 11 - 101 - Suite G43		120		-	-
Block 11 - 116 - Escape Stair		120		-	-
Block 11 - 110 - Lift Lobby		120		-	-
Block 11 - 115 - Suite G51		120		-	-
Block 11 - 113 - Suite G50		120		-	-
Block 11 - 112 - Accessible WC		120		-	-
Block 11 - 111 - Lifts		120		-	-
Block 21 - 216 - Escape Stair		120		-	-
Block 21 - 217 - Store		120		-	-
Block 21 - 202 - Suite G53		120		-	-
Block 21 - 201 - Suite G52		120		-	-
Block 21 - 207 - Suite G58		120		-	-

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
Block 21 - 208 - Escape Stair		120	-	-
Block 21 - 214 - Store		120	-	-
Block 21 - 203 - Suite G54		120	-	-
Block 21 - 204 - Suite G55		120	-	-
Block 21 - 213 - Suite G60		120	-	-
Block 21 - 209 - Lift Lobby		120	-	-
Block 21 - 206 - Suite G57		120	-	-
Block 21 - 210 - Lifts		120	-	-
Block 21 - 205 - Suite G56		120	-	-
Block 21 - 215 - Block 21 Corridor		120	-	-
Block 21 - 211 - Accessible WC		120	-	-
Block 21 - 212 - Suite G59		120	-	-
Block 12 - 117a - Link Corridor		120	-	-
Block 13 - 117b - Link Corridor		120	-	-
Block 00 - B07 - Plant		120	-	-

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?
Block 00 - B03 - Training Room	NO (-47.7%)	NO
Block 00 - B04 - Staff Rest	NO (-64.5%)	NO
Block 01 - 003 - Suite G16	NO (-64.4%)	NO
Block 01 - 004 - Suite G17	NO (-60.4%)	NO
Block 01 - 006 - Suite G19	NO (-60.1%)	NO
Block 01 - 007 - Suite G20	NO (-60.8%)	NO
Block 01 - 008 - Suite G21	NO (-61%)	NO
Block 01 - 001 - Suite G15	NO (-68.8%)	NO
Block 01 - 016 - Cinema	N/A	N/A
Block 01 - 015 - Social	N/A	N/A
Block 03 - 032 - Suite G05	NO (-91.9%)	NO
Block 03 - 033 - Suite G06	NO (-51.4%)	NO
Block 03 - 035 - Suite G07	NO (-56.7%)	NO
Block 03 - 030 - Suite G04	NO (-73.2%)	NO
Block 03 - 049 - Suite G12	NO (-44.8%)	NO
Block 03 - 036 - Suite G08	NO (-57.1%)	NO
Block 03 - 037 - Residents Dining	NO (-67.7%)	NO
Block 03 - 028 - Suite G03	NO (-73.2%)	NO
Block 03 - 047 - Suite G13	NO (-62.2%)	NO
Block 03 - 050 - Suite G11	NO (-66.2%)	NO
Block 03 - 046 - Suite G14	NO (-61.2%)	NO
Block 03 - 027 - Suite G02	NO (-69.9%)	NO
Block 03 - 038 - Suite G08	NO (-85.5%)	NO
Block 03 - 025 - Suite G01	NO (-92.5%)	NO
Block 03 - 023 - Therapy Room	NO (-37.9%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
Block 03 - 043 - Residents Sitting Room	NO (-69.2%)	NO
Block 03 - 042 - Residents Sitting Room	NO (-68.6%)	NO
Block 03 - 039 - Family Room	NO (-87.9%)	NO
Block 03 - 022 - Hairdresser	NO (-3.1%)	NO
Block 03 - 041 - Nurse Office	NO (-70.7%)	NO
Block 03 - 021 - Cafe	NO (-2.7%)	NO
Block 03 - 040 - Reception	N/A	N/A
Block 03 - 020 - Shop	NO (-55.8%)	NO
Block 14 - 133 - Suite G31	NO (-79.3%)	NO
Block 14 - 134 - Suite G32	NO (-67.8%)	NO
Block 14 - 136 - Suite G33	NO (-70.8%)	NO
Block 14 - 131 - Suite G30	NO (-84.1%)	NO
Block 14 - 148 - Suite G37	NO (-40.3%)	NO
Block 14 - 137 - Suite G34	NO (-71.1%)	NO
Block 14 - 138 - Residents Dining	NO (-79.7%)	NO
Block 14 - 129 - Suite G29	NO (-87%)	NO
Block 14 - 146 - Suite G38	NO (-59.1%)	NO
Block 14 - 149 - Suite G36	NO (-63.5%)	NO
Block 14 - 145 - Suite G39	NO (-58%)	NO
Block 14 - 128 - Suite G28	NO (-82.1%)	NO
Block 14 - 143 - Suite G40	NO (-51.3%)	NO
Block 14 - 139 - Nurse Office	N/A	N/A
Block 14 - 126 - Suite G27	NO (-77.3%)	NO
Block 14 - 142 - Suite G41	NO (-70.2%)	NO
Block 14 - 140 - Social Room	NO (-83.7%)	NO
Block 14 - 124 - Suite G26	NO (-71.3%)	NO
Block 14 - 123 - Suite G25	NO (-67.5%)	NO
Block 14 - 141 - Suite G42	NO (-73%)	NO
Block 14 - 122 - Suite G24	NO (-65.8%)	NO
Block 14 - 121 - Suite G23	NO (-67.1%)	NO
Block 14 - 120 - Suite G22	NO (-83.6%)	NO
Block 11 - 103 - Suite G44	NO (-59.1%)	NO
Block 11 - 104 - Suite G45	NO (-54.5%)	NO
Block 11 - 105 - Suite G46	NO (-54.5%)	NO
Block 11 - 106 - Suite G47	NO (-54.1%)	NO
Block 11 - 107 - Suite G48	NO (-54.9%)	NO
Block 11 - 108 - Suite G49	NO (-55.2%)	NO
Block 11 - 101 - Suite G43	NO (-66.5%)	NO
Block 11 - 115 - Suite G51	N/A	N/A
Block 11 - 113 - Suite G50	N/A	N/A
Block 21 - 202 - Suite G53	NO (-83.6%)	NO
Block 21 - 201 - Suite G52	NO (-85.7%)	NO
Block 21 - 207 - Suite G58	NO (-80.9%)	NO
Block 21 - 203 - Suite G54	NO (-78.1%)	NO
Block 21 - 204 - Suite G55	NO (-78.1%)	NO
Block 21 - 213 - Suite G60	NO (-86.9%)	NO
Block 21 - 206 - Suite G57	NO (-78.3%)	NO
Block 21 - 205 - Suite G56	NO (-78%)	NO
Block 21 - 212 - Suite G59	NO (-90.1%)	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?	YES
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]	4109.2	4109.2
External area [m ²]	6087.2	6087.2
Weather	SWI	SWI
Infiltration [m ³ /hm ² @ 50Pa]	3	3
Average conductance [W/K]	1820.99	2143.8
Average U-value [W/m ² K]	0.3	0.35
Alpha value* [%]	20.26	20.76

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

Building Use

% Area Building Type

2	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
98	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	18.68	20.22
Cooling	0	0
Auxiliary	16.49	16.46
Lighting	10.18	9.62
Hot water	126.86	223.01
Equipment*	43.35	43.35
TOTAL **	172.21	269.31

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

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	399.8	407.49
Primary energy [kWh _{PE} /m ²]	261.52	398.36
Total emissions [kg/m ²]	24.16	36.72

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 SSEEF	Cool SSEER	Heat gen SEFF	Cool gen SEER	
[ST] Central heating using water: radiators, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	196.7	188.6	18.9	0	16.7	2.89	0	3.24	0
	Notional	194.4	198.7	20.5	0	16.7	2.64	0	----	----
[ST] No Heating or Cooling										
	Actual	0	1638.1	0	0	0	0	0	0	0
	Notional	0	1637.8	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

Project name

Care Home - Renewables

As designed

Date: Thu Mar 26 12:01:56 2026

Administrative information

Building Details

Address: Former Co-op Store, Mill Street, CALNE, SN11 0HT

Certifier details

Name: Jordan Howlett

Telephone number: 01242 506150

Address: Ground Floor Park Court Knapp Lane, Cheltenham, GL50 3QJ

Certification tool

Calculation engine: SBEM

Calculation engine version: v6.1.e.2

Interface to calculation engine: DesignBuilder SBEM

Interface to calculation engine version: v7.3.1

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

Foundation area [m²]: 1023.11The 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	36.72
Building CO ₂ emission rate (BER), kgCO ₂ /m ² annum	22.75
Target primary energy rate (TPER), kWh _{PE} /m ² annum	398.36
Building primary energy rate (BPER), kWh _{PE} /m ² annum	245.31
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	Block 00 - B08 - Basement Corridor_P_9
Floors	0.18	0.11	0.18	Block 01 - 007 - Suite G20_F_4
Pitched roofs	0.16	0.16	0.16	Block 21 - 201 - Suite G52_R_16
Flat roofs	0.18	0.18	0.18	Block 02 - 018 - Street_R_5
Windows** and roof windows	1.6	1.6	1.6	Block 00 - B01 - Kitchen_G_6
Rooflights***	2.2	-	-	No external rooflights
Personnel doors^	1.6	1.6	1.6	Block 00 - B02 - Escape Corridor_D_9
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	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	NO
Whole building electric power factor achieved by power factor correction	<0.9

1- ASHP

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.24	-	-	-	-
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.					

1- DHW

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	2	0.012
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		
Block 00 - B01 - Kitchen		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 00 - B05 - Female Showers		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 00 - B06 - Female WCs		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 00 - B15 - Laundry		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 00 - B13 - Male Showers		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 00 - B12 - Male WCs		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 01 - 003 - Suite G16		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 01 - 004 - Suite G17		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 01 - 006 - Suite G19		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 01 - 007 - Suite G20		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 01 - 008 - Suite G21		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 01 - 001 - Suite G15		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 01 - 012 - Accessible WC		-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 032 - Suite G05		-	-	0.5	-	-	-	-	-	-	-	N/A

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		
Block 03 - 033 - Suite G06	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 035 - Suite G07	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 030 - Suite G04	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 049 - Suite G12	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 036 - Suite G08	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 028 - Suite G03	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 047 - Suite G13	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 050 - Suite G11	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 046 - Suite G14	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 027 - Suite G02	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 038 - Suite G08	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 03 - 025 - Suite G01	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 133 - Suite G31	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 134 - Suite G32	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 136 - Suite G33	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 131 - Suite G30	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 148 - Suite G37	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 137 - Suite G34	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 129 - Suite G29	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 146 - Suite G38	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 149 - Suite G36	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 145 - Suite G39	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 128 - Suite G28	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 143 - Suite G40	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 126 - Suite G27	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 142 - Suite G41	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 124 - Suite G26	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 123 - Suite G25	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 141 - Suite G42	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 122 - Suite G24	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 121 - Suite G23	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 14 - 120 - Suite G22	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 103 - Suite G44	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 104 - Suite G45	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 105 - Suite G46	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 106 - Suite G47	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 107 - Suite G48	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 108 - Suite G49	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 101 - Suite G43	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 115 - Suite G51	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 113 - Suite G50	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 11 - 112 - Accessible WC	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 202 - Suite G53	-	-	0.5	-	-	-	-	-	-	-	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
Block 21 - 201 - Suite G52	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 207 - Suite G58	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 203 - Suite G54	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 204 - Suite G55	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 213 - Suite G60	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 206 - Suite G57	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 205 - Suite G56	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 211 - Accessible WC	-	-	0.5	-	-	-	-	-	-	-	N/A
Block 21 - 212 - Suite G59	-	-	0.5	-	-	-	-	-	-	-	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
Block 00 - B08 - Basement Corridor		120	-	-
Block 00 - B02 - Escape Corridor		120	-	-
Block 00 - B01 - Kitchen		120	-	-
Block 00 - B03 - Training Room		120	-	-
Block 00 - B04 - Staff Rest		120	-	-
Block 00 - B05 - Female Showers		120	-	-
Block 00 - B06 - Female WCs		120	-	-
Block 00 - B09 - Escape Stair		120	-	-
Block 00 - B15 - Laundry		120	-	-
Block 00 - B10 - Lift Lobby		120	-	-
Block 00 - B14 - Stores		120	-	-
Block 00 - B13 - Male Showers		120	-	-
Block 00 - B12 - Male WCs		120	-	-
Block 00 - B11 - Lifts		120	-	-
Block 01 - 002 - Service Lift		120	-	-
Block 01 - 003 - Suite G16		120	-	-
Block 01 - 014 - Block 1 Corridor		120	-	-
Block 01 - 004 - Suite G17		120	-	-
Block 01 - 006 - Suite G19		120	-	-
Block 01 - 007 - Suite G20		120	-	-
Block 01 - 008 - Suite G21		120	-	-
Block 01 - 009 - Service Stair		120	-	-
Block 01 - 001 - Suite G15		120	-	-
Block 01 - 017 - Escape Stair		120	-	-
Block 01 - 010 - Lift Lobby		120	-	-
Block 01 - 016 - Cinema		120	-	-
Block 01 - 015 - Social		120	-	-
Block 01 - 013 - Linen Store		120	-	-
Block 01 - 011 - Lifts		120	-	-
Block 01 - 012 - Accessible WC		120	-	-

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	
Block 03 - 032 - Suite G05		120	-	-	
Block 03 - 033 - Suite G06		120	-	-	
Block 03 - 029 - Block 2 Corridor 3		120	-	-	
Block 03 - 031 - Escape Stair		120	-	-	
Block 03 - 035 - Suite G07		120	-	-	
Block 03 - 030 - Suite G04		120	-	-	
Block 03 - 048 - SPA		120	-	-	
Block 03 - 049 - Suite G12		120	-	-	
Block 03 - 034 - Block 2 Corridor 4		120	-	-	
Block 03 - 036 - Suite G08		120	-	-	
Block 03 - 037 - Residents Dining		120	-	-	
Block 03 - 028 - Suite G03		120	-	-	
Block 03 - 047 - Suite G13		120	-	-	
Block 03 - 050 - Suite G11		120	-	-	
Block 03 - 024 - Block 2 Corridor 2		120	-	-	
Block 03 - 046 - Suite G14		120	-	-	
Block 03 - 027 - Suite G02		120	-	-	
Block 03 - 026 - Escape Stair		120	-	-	
Block 03 - 045 - Sluice		120	-	-	
Block 03 - 044 - Store		120	-	-	
Block 03 - 038 - Suite G08		120	-	-	
Block 03 - 025 - Suite G01		120	-	-	
Block 03 - 023 - Therapy Room		120	-	-	
Block 03 - 019 - Block 2 Corridor 1		120	-	-	
Block 03 - 043 - Residents Sitting Room		120	-	-	
Block 03 - 042 - Residents Sitting Room		120	-	-	
Block 03 - 039 - Family Room		120	-	-	
Block 03 - 022 - Hairdresser		120	120	1.25	
Block 03 - 041 - Nurse Office		120	-	-	
Block 03 - 021 - Cafe		120	-	-	
Block 03 - 040 - Reception		120	120	1.125	
Block 03 - 020 - Shop		120	120	1.25	
Block 02 - 018 - Street		120	-	-	
Block 14 - 133 - Suite G31		120	-	-	
Block 14 - 134 - Suite G32		120	-	-	
Block 14 - 130 - Block 14 Corridor 3		120	-	-	
Block 14 - 132 - Escape Stair		120	-	-	
Block 14 - 136 - Suite G33		120	-	-	
Block 14 - 131 - Suite G30		120	-	-	
Block 14 - 147 - SPA		120	-	-	
Block 14 - 148 - Suite G37		120	-	-	
Block 14 - 135 - Block 14 Corridor 4		120	-	-	
Block 14 - 137 - Suite G34		120	-	-	

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
Block 14 - 138 - Residents Dining		120		-	-
Block 14 - 129 - Suite G29		120		-	-
Block 14 - 146 - Suite G38		120		-	-
Block 14 - 149 - Suite G36		120		-	-
Block 14 - 125 - Block 14 Corridor 2		120		-	-
Block 14 - 145 - Suite G39		120		-	-
Block 14 - 128 - Suite G28		120		-	-
Block 14 - 127 - Escape Stair		120		-	-
Block 14 - 144 - Hoist Store		120		-	-
Block 14 - 143 - Suite G40		120		-	-
Block 14 - 139 - Nurse Office		120		-	-
Block 14 - 126 - Suite G27		120		-	-
Block 14 - 142 - Suite G41		120		-	-
Block 14 - 140 - Social Room		120		-	-
Block 14 - 124 - Suite G26		120		-	-
Block 14 - 118 - Block 14 Corridor 1		120		-	-
Block 14 - 123 - Suite G25		120		-	-
Block 14 - 141 - Suite G42		120		-	-
Block 14 - 122 - Suite G24		120		-	-
Block 14 - 121 - Suite G23		120		-	-
Block 14 - 119 - Cleaners Store		120		-	-
Block 14 - 120 - Suite G22		120		-	-
Block 11 - 102 - Service Lift		120		-	-
Block 11 - 103 - Suite G44		120		-	-
Block 11 - 114 - Block 11 Corridor		120		-	-
Block 11 - 104 - Suite G45		120		-	-
Block 11 - 105 - Suite G46		120		-	-
Block 11 - 106 - Suite G47		120		-	-
Block 11 - 107 - Suite G48		120		-	-
Block 11 - 108 - Suite G49		120		-	-
Block 11 - 109 - Service Stair		120		-	-
Block 11 - 101 - Suite G43		120		-	-
Block 11 - 116 - Escape Stair		120		-	-
Block 11 - 110 - Lift Lobby		120		-	-
Block 11 - 115 - Suite G51		120		-	-
Block 11 - 113 - Suite G50		120		-	-
Block 11 - 112 - Accessible WC		120		-	-
Block 11 - 111 - Lifts		120		-	-
Block 21 - 216 - Escape Stair		120		-	-
Block 21 - 217 - Store		120		-	-
Block 21 - 202 - Suite G53		120		-	-
Block 21 - 201 - Suite G52		120		-	-
Block 21 - 207 - Suite G58		120		-	-

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
Block 21 - 208 - Escape Stair		120	-	-
Block 21 - 214 - Store		120	-	-
Block 21 - 203 - Suite G54		120	-	-
Block 21 - 204 - Suite G55		120	-	-
Block 21 - 213 - Suite G60		120	-	-
Block 21 - 209 - Lift Lobby		120	-	-
Block 21 - 206 - Suite G57		120	-	-
Block 21 - 210 - Lifts		120	-	-
Block 21 - 205 - Suite G56		120	-	-
Block 21 - 215 - Block 21 Corridor		120	-	-
Block 21 - 211 - Accessible WC		120	-	-
Block 21 - 212 - Suite G59		120	-	-
Block 12 - 117a - Link Corridor		120	-	-
Block 13 - 117b - Link Corridor		120	-	-
Block 00 - B07 - Plant		120	-	-

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?
Block 00 - B03 - Training Room	NO (-47.7%)	NO
Block 00 - B04 - Staff Rest	NO (-64.5%)	NO
Block 01 - 003 - Suite G16	NO (-64.4%)	NO
Block 01 - 004 - Suite G17	NO (-60.4%)	NO
Block 01 - 006 - Suite G19	NO (-60.1%)	NO
Block 01 - 007 - Suite G20	NO (-60.8%)	NO
Block 01 - 008 - Suite G21	NO (-61%)	NO
Block 01 - 001 - Suite G15	NO (-68.8%)	NO
Block 01 - 016 - Cinema	N/A	N/A
Block 01 - 015 - Social	N/A	N/A
Block 03 - 032 - Suite G05	NO (-91.9%)	NO
Block 03 - 033 - Suite G06	NO (-51.4%)	NO
Block 03 - 035 - Suite G07	NO (-56.7%)	NO
Block 03 - 030 - Suite G04	NO (-73.2%)	NO
Block 03 - 049 - Suite G12	NO (-44.8%)	NO
Block 03 - 036 - Suite G08	NO (-57.1%)	NO
Block 03 - 037 - Residents Dining	NO (-67.7%)	NO
Block 03 - 028 - Suite G03	NO (-73.2%)	NO
Block 03 - 047 - Suite G13	NO (-62.2%)	NO
Block 03 - 050 - Suite G11	NO (-66.2%)	NO
Block 03 - 046 - Suite G14	NO (-61.2%)	NO
Block 03 - 027 - Suite G02	NO (-69.9%)	NO
Block 03 - 038 - Suite G08	NO (-85.5%)	NO
Block 03 - 025 - Suite G01	NO (-92.5%)	NO
Block 03 - 023 - Therapy Room	NO (-37.9%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
Block 03 - 043 - Residents Sitting Room	NO (-69.2%)	NO
Block 03 - 042 - Residents Sitting Room	NO (-68.6%)	NO
Block 03 - 039 - Family Room	NO (-87.9%)	NO
Block 03 - 022 - Hairdresser	NO (-3.1%)	NO
Block 03 - 041 - Nurse Office	NO (-70.7%)	NO
Block 03 - 021 - Cafe	NO (-2.7%)	NO
Block 03 - 040 - Reception	N/A	N/A
Block 03 - 020 - Shop	NO (-55.8%)	NO
Block 14 - 133 - Suite G31	NO (-79.3%)	NO
Block 14 - 134 - Suite G32	NO (-67.8%)	NO
Block 14 - 136 - Suite G33	NO (-70.8%)	NO
Block 14 - 131 - Suite G30	NO (-84.1%)	NO
Block 14 - 148 - Suite G37	NO (-40.3%)	NO
Block 14 - 137 - Suite G34	NO (-71.1%)	NO
Block 14 - 138 - Residents Dining	NO (-79.7%)	NO
Block 14 - 129 - Suite G29	NO (-87%)	NO
Block 14 - 146 - Suite G38	NO (-59.1%)	NO
Block 14 - 149 - Suite G36	NO (-63.5%)	NO
Block 14 - 145 - Suite G39	NO (-58%)	NO
Block 14 - 128 - Suite G28	NO (-82.1%)	NO
Block 14 - 143 - Suite G40	NO (-51.3%)	NO
Block 14 - 139 - Nurse Office	N/A	N/A
Block 14 - 126 - Suite G27	NO (-77.3%)	NO
Block 14 - 142 - Suite G41	NO (-70.2%)	NO
Block 14 - 140 - Social Room	NO (-83.7%)	NO
Block 14 - 124 - Suite G26	NO (-71.3%)	NO
Block 14 - 123 - Suite G25	NO (-67.5%)	NO
Block 14 - 141 - Suite G42	NO (-73%)	NO
Block 14 - 122 - Suite G24	NO (-65.8%)	NO
Block 14 - 121 - Suite G23	NO (-67.1%)	NO
Block 14 - 120 - Suite G22	NO (-83.6%)	NO
Block 11 - 103 - Suite G44	NO (-59.1%)	NO
Block 11 - 104 - Suite G45	NO (-54.5%)	NO
Block 11 - 105 - Suite G46	NO (-54.5%)	NO
Block 11 - 106 - Suite G47	NO (-54.1%)	NO
Block 11 - 107 - Suite G48	NO (-54.9%)	NO
Block 11 - 108 - Suite G49	NO (-55.2%)	NO
Block 11 - 101 - Suite G43	NO (-66.5%)	NO
Block 11 - 115 - Suite G51	N/A	N/A
Block 11 - 113 - Suite G50	N/A	N/A
Block 21 - 202 - Suite G53	NO (-83.6%)	NO
Block 21 - 201 - Suite G52	NO (-85.7%)	NO
Block 21 - 207 - Suite G58	NO (-80.9%)	NO
Block 21 - 203 - Suite G54	NO (-78.1%)	NO
Block 21 - 204 - Suite G55	NO (-78.1%)	NO
Block 21 - 213 - Suite G60	NO (-86.9%)	NO
Block 21 - 206 - Suite G57	NO (-78.3%)	NO
Block 21 - 205 - Suite G56	NO (-78%)	NO
Block 21 - 212 - Suite G59	NO (-90.1%)	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?	YES
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]	4109.2	4109.2
External area [m ²]	6087.2	6087.2
Weather	SWI	SWI
Infiltration [m ³ /hm ² @ 50Pa]	3	3
Average conductance [W/K]	1820.99	2143.8
Average U-value [W/m ² K]	0.3	0.35
Alpha value* [%]	20.26	20.76

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

Building Use

% Area Building Type

2 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

98 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	18.68	20.22
Cooling	0	0
Auxiliary	16.49	16.46
Lighting	10.18	9.62
Hot water	126.86	223.01
Equipment*	43.35	43.35
TOTAL **	172.21	269.31

* 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	11.04	0
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
<i>Displaced electricity</i>	<i>11.04</i>	<i>0</i>

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	399.8	407.49
Primary energy [kWh _{PE} /m ²]	245.31	398.36
Total emissions [kg/m ²]	22.75	36.72

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	196.7	188.6	18.9	0	16.7	2.89	0	3.24	0
	Notional	194.4	198.7	20.5	0	16.7	2.64	0	----	----
[ST] No Heating or Cooling										
	Actual	0	1638.1	0	0	0	0	0	0	0
	Notional	0	1637.8	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