

Project name

Shell and Core

1 New Quay street (Shell)

As built

Date: Mon Feb 21 09:11:24 2022

Administrative information

Building Details

Address: 1 New Quay street (Shell), MANCHESTER, M3 4BN

Certification tool

Calculation engine: TAS

Calculation engine version: "v9.5.1"

Interface to calculation engine: TAS

Interface to calculation engine version: v9.5.1

BRUKL compliance check version: v5.6.b.0

Certifier details

Name: Paul Bacon

Telephone number: 01908 261461

Address: 13-14 Cofferridge Close, Stony Stratford, Milton Keynes, MK11 1BY

Criterion 1: The calculated CO₂ emission rate for the building must not exceed the target

CO ₂ emission rate from the notional building, kgCO ₂ /m ² .annum	6.6
Target CO ₂ emission rate (TER), kgCO ₂ /m ² .annum	6.6
Building CO ₂ emission rate (BER), kgCO ₂ /m ² .annum	4.6
Are emissions from the building less than or equal to the target?	BER ≤ TER
Are as built details the same as used in the BER calculations?	Separate submission

Criterion 2: The performance of the building fabric and fixed building services should achieve reasonable overall standards of energy efficiency

Values which do not achieve the standards in the Non-Domestic Building Services Compliance Guide and Part L are displayed in red.

Building fabric

Element	U _a -Limit	U _a -Calc	U _i -Calc	Surface where the maximum value occurs*
Wall**	0.35	0.35	0.4	External Wall
Floor	0.25	0.22	0.22	Ground Floor
Roof	0.25	0.15	0.15	Roof
Windows***, roof windows, and rooflights	2.2	0.93	1.11	Glazing
Personnel doors	2.2	1.11	1.11	Double Door Back
Vehicle access & similar large doors	1.5	-	-	No vehicle doors in project
High usage entrance doors	3.5	1.11	1.11	Automatic Pedestrian Doors Narrow
U _a -Limit = Limiting area-weighted average U-values [W/(m ² K)] U _a -Calc = Calculated area-weighted average U-values [W/(m ² K)] U _i -Calc = Calculated maximum individual element U-values [W/(m ² K)] * There might be more than one surface where the maximum U-value occurs. ** 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. N.B.: Neither roof ventilators (inc. smoke vents) nor swimming pool basins are modelled or checked against the limiting standards by the tool.				

Air Permeability	Worst acceptable standard	This building
m ³ /(h.m ²) at 50 Pa	10	2.83

Building services

The standard values listed below are minimum values for efficiencies and maximum values for SFPs. Refer to the Non-Domestic Building Services Compliance Guide for details.

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- Natural Ventilation

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	0.96	-	-	-	-
Standard value	0.91*	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. For single boiler systems >2 MW or multi-boiler systems, (overall) limiting efficiency is 0.86. For any individual boiler in a multi-boiler system, limiting efficiency is 0.82.					

2- Extract (12 Zones)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	0.96	-	-	0.56	-
Standard value	0.91*	N/A	N/A	1.1^	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. For single boiler systems >2 MW or multi-boiler systems, (overall) limiting efficiency is 0.86. For any individual boiler in a multi-boiler system, limiting efficiency is 0.82.					
^ Limiting SFP may be extended by the amounts specified in the Non-Domestic Building Services Compliance Guide if the system includes additional components as listed in the Guide.					

3- AHU Average for split (327 Zones)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	0.96	5.95	-	1.82	0.79
Standard value	0.91*	2.6	N/A	1.6^	0.65
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. For single boiler systems >2 MW or multi-boiler systems, (overall) limiting efficiency is 0.86. For any individual boiler in a multi-boiler system, limiting efficiency is 0.82.					
^ Limiting SFP may be extended by the amounts specified in the Non-Domestic Building Services Compliance Guide if the system includes additional components as listed in the Guide.					

4- AHU Average for split (Office G 20)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	0.96	-	-	1.82	0.79
Standard value	0.91*	N/A	N/A	1.6^	0.65
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. For single boiler systems >2 MW or multi-boiler systems, (overall) limiting efficiency is 0.86. For any individual boiler in a multi-boiler system, limiting efficiency is 0.82.					
^ Limiting SFP may be extended by the amounts specified in the Non-Domestic Building Services Compliance Guide if the system includes additional components as listed in the Guide.					

1- New HWS Circuit

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	0.96	0
Standard value	0.9*	N/A
* Standard shown is for gas boilers >30 kW output. For boilers <=30 kW output, limiting efficiency is 0.73.		

2- New HWS Circuit

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	1	0
Standard value	0.9*	N/A
* Standard shown is for gas boilers >30 kW output. For boilers <=30 kW output, limiting efficiency is 0.73.		

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

Shell and core configuration

Zone	Excluded from calculation?
Office G 1	YES
Office G 2	YES
Office G 3	YES
Office G 4	YES
Office G 5	YES
Office L1 1	YES
Office L1 2	YES
Office L1 3	YES
Office L1 4	YES
Office L1 5	YES
Office L1 6	YES
Office L1 7	YES
Office L2 1	YES
Office L2 2	YES
Office L2 3	YES
Office L2 4	YES
Office L2 5	YES
Office L2 6	YES
Office L2 7	YES
Stairs 1.1	NO
Stairs 1.2	NO
Stairs 2.1	NO
Stairs 2.2	NO
Stairs 3.1	NO
Stairs 3.2	NO
Stairs 4.1	NO
Stairs 4.2	NO
Stairs 5.1	NO
Stairs 5.2	NO
Stairs 6.1	NO
Office G 6	YES
Office G 7	YES
Office M 2	YES
Office M 3	YES
Office M 4	YES
Office M 5	YES
Office M 6	YES
Stairs 6.2	NO
Stairs 7.1	NO
Stairs 7.2	NO
Stairs 8.1	NO
Stairs 8.2	NO
Stairs M.1	NO
Stairs M.2	NO
Office G 8	YES

Shell and core configuration

Zone	Excluded from calculation?
Office G 9	YES
Office G 10	YES
Office G 11	YES
Office G 12	YES
Office G 13	YES
Office G 14	YES
Office G 15	YES
Office G 16	YES
Office G 19	YES
Office L1 8	YES
Office L1 9	YES
Office L1 10	YES
Office L1 11	YES
Office L1 12	YES
Office L1 13	YES
Office L1 14	YES
Office L1 15	YES
Office L1 16	YES
Office L1 17	YES
Office L1 18	YES
Office L1 19	YES
Office L1 20	YES
Office L2 8	YES
Office L2 9	YES
Office L2 10	YES
Office L2 11	YES
Office L2 12	YES
Office L2 13	YES
Office L2 14	YES
Office L2 15	YES
Office L2 16	YES
Office L2 17	YES
Office L2 18	YES
Office L2 19	YES
Office L2 20	YES
Stairs G.2	NO
Office L1 21	YES
Office L1 22	YES
Office L1 23	YES
Office L1 24	YES
Office L1 25	YES
Office L1 26	YES
Office L1 27	YES
Office L1 28	YES
Office L1 29	YES
Office L1 30	YES
Office L1 31	YES

Shell and core configuration

Zone	Excluded from calculation?
Office L1 32	YES
Office L1 33	YES
Office L1 34	YES
Office L2 21	YES
Office L2 22	YES
Office L2 23	YES
Office L2 24	YES
Office L2 25	YES
Office L2 26	YES
Office L2 27	YES
Office L2 28	YES
Office L2 29	YES
Office L2 30	YES
Office L2 31	YES
Office L2 32	YES
Office L2 33	YES
Office L2 34	YES
B1_Store 2	NO
Office G 29 Lift Lobby	YES
Reception Entrance Zone 1	YES
Reception Entrance Zone 2	YES
Reception Entrance Zone 3	YES
Office L3 1	YES
Office L3 2	YES
Office L3 3	YES
Office L3 4	YES
Office L3 5	YES
Office L3 6	YES
Office L3 7	YES
Office L3 8	YES
Office L3 9	YES
Office L3 10	YES
Office L3 11	YES
Office L3 12	YES
Office L3 13	YES
Office L3 14	YES
Office L3 15	YES
Office L3 16	YES
Office L3 17	YES
Office L3 18	YES
Office L3 19	YES
Office L3 20	YES
Office L4 1	YES
Office L4 2	YES
Office L4 3	YES
Office L4 4	YES
Office L4 5	YES

Shell and core configuration

Zone	Excluded from calculation?
Office L4 6	YES
Office L4 7	YES
Office L4 8	YES
Office L4 9	YES
Office L4 10	YES
Office L4 11	YES
Office L4 12	YES
Office L4 13	YES
Office L4 14	YES
Office L4 15	YES
Office L4 16	YES
Office L4 17	YES
Office L4 18	YES
Office L4 19	YES
Office L4 20	YES
Office L5 1	YES
Office L5 2	YES
Office L5 3	YES
Office L5 4	YES
Office L5 5	YES
Office L5 6	YES
Office L5 7	YES
Office L5 8	YES
Office L5 9	YES
Office L5 10	YES
Office L5 11	YES
Office L5 12	YES
Office L5 13	YES
Office L5 14	YES
Office L5 15	YES
Office L5 16	YES
Office L5 17	YES
Office L5 18	YES
Office L5 19	YES
Office L5 20	YES
Office L6 1	YES
Office L6 2	YES
Office L6 3	YES
Office L6 4	YES
Office L6 5	YES
Office L6 6	YES
Office L6 7	YES
Office L6 8	YES
Office L6 9	YES
Office L6 10	YES
Office L6 11	YES
Office L6 12	YES

Shell and core configuration

Zone	Excluded from calculation?
Office L6 13	YES
Office L6 14	YES
Office L6 15	YES
Office L6 16	YES
Office L6 17	YES
Office L6 18	YES
Office L6 19	YES
Office L6 20	YES
Office L7 1	YES
Office L7 2	YES
Office L7 3	YES
Office L7 4	YES
Office L7 5	YES
Office L7 6	YES
Office L7 7	YES
Office L7 8	YES
Office L7 9	YES
Office L7 10	YES
Office L7 11	YES
Office L7 12	YES
Office L7 13	YES
Office L7 14	YES
Office L7 15	YES
Office L7 16	YES
Office L7 17	YES
Office L7 18	YES
Office L7 19	YES
Office L7 20	YES
Office L8 1	YES
Office L8 2	YES
Office L8 3	YES
Office L8 4	YES
Office L8 5	YES
Office L8 6	YES
Office L8 7	YES
Office L8 8	YES
Office L8 9	YES
Office L8 10	YES
Office L8 11	YES
Office L8 12	YES
Office L8 13	YES
Office L8 14	YES
Office L8 15	YES
Office L8 16	YES
Office L8 17	YES
Office L8 18	YES
Office L8 19	YES

Shell and core configuration

Zone	Excluded from calculation?
Office L8 20	YES
Office L3 21	YES
Office L3 22	YES
Office L3 23	YES
Office L3 24	YES
Office L3 25	YES
Office L3 26	YES
Office L3 27	YES
Office L3 28	YES
Office L3 29	YES
Office L3 30	YES
Office L3 31	YES
Office L3 32	YES
Office L4 21	YES
Office L4 22	YES
Office L4 23	YES
Office L4 24	YES
Office L4 25	YES
Office L4 26	YES
Office L4 27	YES
Office L4 28	YES
Office L4 29	YES
Office L3 33	YES
Office L3 34	YES
Office L4 30	YES
Office L4 31	YES
Office L4 32	YES
Office L4 33	YES
Office L4 34	YES
Office L5 21	YES
Office L5 22	YES
Office L5 23	YES
Office L5 24	YES
Office L5 25	YES
Office L5 26	YES
Office L5 27	YES
Office L5 28	YES
Office L5 29	YES
Office L5 30	YES
Office L5 31	YES
Office L5 32	YES
Office L5 33	YES
Office L5 34	YES
Office L6 21	YES
Office L6 22	YES
Office L6 23	YES
Office L6 24	YES

Shell and core configuration

Zone	Excluded from calculation?
Office L6 25	YES
Office L6 26	YES
Office L6 27	YES
Office L6 28	YES
Office L6 29	YES
Office L6 30	YES
Office L6 31	YES
Office L6 32	YES
Office L6 33	YES
Office L6 34	YES
Office L7 21	YES
Office L7 22	YES
Office L7 23	YES
Office L7 24	YES
Office L7 25	YES
Office L7 26	YES
Office L7 27	YES
Office L7 28	YES
Office L7 29	YES
Office L7 30	YES
Office L7 31	YES
Office L7 32	YES
Office L7 33	YES
Office L7 34	YES
Office L8 21	YES
Office L8 22	YES
Office L8 23	YES
Office L8 24	YES
Office L8 25	YES
Office L8 26	YES
Office L8 27	YES
Office L8 28	YES
Office L8 29	YES
Office L8 30	YES
Office L8 31	YES
Office L8 32	YES
Office L8 33	YES
Office L8 34	YES
Office M 7	YES
Office M 8	YES
Office M 9	YES
Office M 10	YES
Office M 11	YES
Office M 12	YES
Office M 13	YES
Office M 14	YES
Office M 15	YES

Shell and core configuration

Zone	Excluded from calculation?
Office M 16	YES
Office M 17	YES
Office M 18	YES
Office M 19	YES
Office M 20	YES
Office M 21	YES
Office M 22	YES
Office M 23	YES
Office M 24	YES
Office M 25	YES
Office M 26	YES
Office M 27	YES
Office M 28	YES
Office M 29	YES
Office M 30	YES
Office M 31	YES
Office M 32	YES
Office M 33	YES
Office M 34	YES
Basement 11 Shower	NO
Basement 12 Shower	NO
Basement 13 Shower	NO
Basement 14 Shower	NO
Basement 15 Shower/WC	NO
Basement 16 Drying Room	NO
Basement 17 Lockers	NO
Basement 18 WC	NO
Basement 19 Store	NO
Basement 20 Store	NO
Basement 21 Store	NO
stairs B.1	NO
Office G 20	YES
Office M 1	YES

General lighting and display lighting

Zone name	Luminous efficacy [lm/W]			General lighting [W]
	Luminaire	Lamp	Display lamp	
Standard value	60	60	22	
Office G 1	-	60	22	194
Office G 2	-	60	22	71
Office G 3	-	60	22	138
Office G 4	-	60	22	116
Office G 5	-	60	22	69
Office L1 1	60	-	-	257
Office L1 2	60	-	-	240
Office L1 3	60	-	-	250

General lighting and display lighting	Luminous efficacy [lm/W]			
Zone name	Luminaire	Lamp	Display lamp	General lighting [W]
Standard value	60	60	22	
Office L1 4	60	-	-	268
Office L1 5	60	-	-	273
Office L1 6	60	-	-	261
Office L1 7	60	-	-	263
Office L2 1	60	-	-	257
Office L2 2	60	-	-	240
Office L2 3	60	-	-	250
Office L2 4	60	-	-	271
Office L2 5	60	-	-	279
Office L2 6	60	-	-	261
Office L2 7	60	-	-	260
Stairs 1.1	-	118	-	30
Stairs 1.2	-	118	-	30
Stairs 2.1	-	118	-	30
Stairs 2.2	-	118	-	30
Stairs 3.1	-	118	-	30
Stairs 3.2	-	118	-	30
Stairs 4.1	-	118	-	30
Stairs 4.2	-	118	-	30
Stairs 5.1	-	118	-	30
Stairs 5.2	-	118	-	30
Stairs 6.1	-	118	-	30
Circ 1	-	103	-	40
Circ 2	-	103	-	28
Circ 3	-	103	-	10
Circ 4	-	103	-	40
Circ 5	-	103	-	28
Circ 6	-	103	-	28
Circ 7	-	103	-	28
Circ 8	-	103	-	28
Office G 6	-	60	22	130
Office G 7	-	60	22	187
Office M 2	60	-	-	241
Office M 3	60	-	-	250
Office M 4	60	-	-	209
Office M 5	60	-	-	273
Office M 6	60	-	-	384
Stairs 6.2	-	118	-	30
Stairs 7.1	-	118	-	30
Stairs 7.2	-	118	-	30
Stairs 8.1	-	118	-	30
Stairs 8.2	-	118	-	30
Stairs M.1	-	118	-	22

General lighting and display lighting	Luminous efficacy [lm/W]			
Zone name	Luminaire	Lamp	Display lamp	General lighting [W]
Standard value	60	60	22	
Stairs M.2	-	118	-	31
Circ 12	-	103	-	28
Circ 13	-	103	-	28
Circ 14	-	103	-	28
Circ 15	-	103	-	28
Office G 8	-	60	22	68
Office G 9	-	60	22	82
Office G 10	-	60	22	48
Office G 11	-	60	22	131
Office G 12	-	60	22	37
Office G 13	-	60	22	135
Office G 14	-	60	22	202
Office G 15	-	60	22	142
Office G 16	-	60	22	128
Office G 19	-	60	22	132
Office L1 8	60	-	-	269
Office L1 9	60	-	-	255
Office L1 10	60	-	-	258
Office L1 11	60	-	-	261
Office L1 12	60	-	-	258
Office L1 13	60	-	-	260
Office L1 14	60	-	-	263
Office L1 15	60	-	-	263
Office L1 16	60	-	-	265
Office L1 17	60	-	-	268
Office L1 18	60	-	-	254
Office L1 19	60	-	-	256
Office L1 20	60	-	-	259
Office L2 8	60	-	-	263
Office L2 9	60	-	-	255
Office L2 10	60	-	-	258
Office L2 11	60	-	-	261
Office L2 12	60	-	-	258
Office L2 13	60	-	-	260
Office L2 14	60	-	-	263
Office L2 15	60	-	-	263
Office L2 16	60	-	-	265
Office L2 17	60	-	-	268
Office L2 18	60	-	-	254
Office L2 19	60	-	-	256
Office L2 20	60	-	-	259
Stairs G.2	-	118	-	35
Office L1 21	60	-	-	253

General lighting and display lighting		Luminous efficacy [lm/W]			General lighting [W]
Zone name		Luminaire	Lamp	Display lamp	
	Standard value	60	60	22	
Office L1 22		60	-	-	249
Office L1 23		60	-	-	253
Office L1 24		60	-	-	95
Office L1 25		60	-	-	260
Office L1 26		60	-	-	74
Office L1 27		60	-	-	268
Office L1 28		60	-	-	255
Office L1 29		60	-	-	217
Office L1 30		60	-	-	281
Office L1 31		60	-	-	253
Office L1 32		60	-	-	231
Office L1 33		60	-	-	249
Office L1 34		60	-	-	149
Office L2 21		60	-	-	253
Office L2 22		60	-	-	249
Office L2 23		60	-	-	253
Office L2 24		60	-	-	95
Office L2 25		60	-	-	260
Office L2 26		60	-	-	74
Office L2 27		60	-	-	268
Office L2 28		60	-	-	255
Office L2 29		60	-	-	217
Office L2 30		60	-	-	281
Office L2 31		60	-	-	253
Office L2 32		60	-	-	231
Office L2 33		60	-	-	249
Office L2 34		60	-	-	149
B1_Plant 3		156	-	-	468
Circ 23		-	103	-	55
Circ 24		-	103	-	38
Circ 25		-	103	-	33
B1_Store 2		156	-	-	5
Office G 29 Lift Lobby		-	60	-	41
Reception Entrance Zone 1		-	60	-	20
Reception Entrance Zone 2		-	60	-	28
Reception Entrance Zone 3		-	60	-	42
Office L3 1		60	-	-	289
Office L3 2		60	-	-	270
Office L3 3		60	-	-	281
Office L3 4		60	-	-	313
Office L3 5		60	-	-	305
Office L3 6		60	-	-	293
Office L3 7		60	-	-	294

General lighting and display lighting		Luminous efficacy [lm/W]			General lighting [W]
Zone name		Luminaire	Lamp	Display lamp	
	Standard value	60	60	22	
Office L3 8		60	-	-	296
Office L3 9		60	-	-	287
Office L3 10		60	-	-	290
Office L3 11		60	-	-	293
Office L3 12		60	-	-	290
Office L3 13		60	-	-	293
Office L3 14		60	-	-	296
Office L3 15		60	-	-	296
Office L3 16		60	-	-	298
Office L3 17		60	-	-	302
Office L3 18		60	-	-	285
Office L3 19		60	-	-	288
Office L3 20		60	-	-	291
Office L4 1		60	-	-	289
Office L4 2		60	-	-	270
Office L4 3		60	-	-	281
Office L4 4		60	-	-	313
Office L4 5		60	-	-	305
Office L4 6		60	-	-	293
Office L4 7		60	-	-	294
Office L4 8		60	-	-	296
Office L4 9		60	-	-	287
Office L4 10		60	-	-	290
Office L4 11		60	-	-	293
Office L4 12		60	-	-	290
Office L4 13		60	-	-	293
Office L4 14		60	-	-	296
Office L4 15		60	-	-	296
Office L4 16		60	-	-	298
Office L4 17		60	-	-	302
Office L4 18		60	-	-	285
Office L4 19		60	-	-	288
Office L4 20		60	-	-	291
Office L5 1		60	-	-	289
Office L5 2		60	-	-	270
Office L5 3		60	-	-	281
Office L5 4		60	-	-	313
Office L5 5		60	-	-	305
Office L5 6		60	-	-	294
Office L5 7		60	-	-	293
Office L5 8		60	-	-	296
Office L5 9		60	-	-	287
Office L5 10		60	-	-	290

General lighting and display lighting		Luminous efficacy [lm/W]			General lighting [W]
Zone name		Luminaire	Lamp	Display lamp	
	Standard value	60	60	22	
Office L5 11		60	-	-	293
Office L5 12		60	-	-	290
Office L5 13		60	-	-	293
Office L5 14		60	-	-	296
Office L5 15		60	-	-	296
Office L5 16		60	-	-	298
Office L5 17		60	-	-	302
Office L5 18		60	-	-	285
Office L5 19		60	-	-	288
Office L5 20		60	-	-	291
Office L6 1		60	-	-	289
Office L6 2		60	-	-	270
Office L6 3		60	-	-	281
Office L6 4		60	-	-	313
Office L6 5		60	-	-	305
Office L6 6		60	-	-	294
Office L6 7		60	-	-	293
Office L6 8		60	-	-	296
Office L6 9		60	-	-	287
Office L6 10		60	-	-	290
Office L6 11		60	-	-	293
Office L6 12		60	-	-	290
Office L6 13		60	-	-	293
Office L6 14		60	-	-	296
Office L6 15		60	-	-	296
Office L6 16		60	-	-	298
Office L6 17		60	-	-	302
Office L6 18		60	-	-	285
Office L6 19		60	-	-	288
Office L6 20		60	-	-	291
Office L7 1		60	-	-	289
Office L7 2		60	-	-	270
Office L7 3		60	-	-	281
Office L7 4		60	-	-	305
Office L7 5		60	-	-	313
Office L7 6		60	-	-	296
Office L7 7		60	-	-	294
Office L7 8		60	-	-	293
Office L7 9		60	-	-	287
Office L7 10		60	-	-	290
Office L7 11		60	-	-	293
Office L7 12		60	-	-	290
Office L7 13		60	-	-	293

General lighting and display lighting		Luminous efficacy [lm/W]			General lighting [W]
Zone name		Luminaire	Lamp	Display lamp	
	Standard value	60	60	22	
Office L7 14		60	-	-	296
Office L7 15		60	-	-	296
Office L7 16		60	-	-	298
Office L7 17		60	-	-	302
Office L7 18		60	-	-	285
Office L7 19		60	-	-	288
Office L7 20		60	-	-	291
Office L8 1		60	-	-	289
Office L8 2		60	-	-	270
Office L8 3		60	-	-	281
Office L8 4		60	-	-	302
Office L8 5		60	-	-	307
Office L8 6		60	-	-	294
Office L8 7		60	-	-	296
Office L8 8		60	-	-	303
Office L8 9		60	-	-	287
Office L8 10		60	-	-	290
Office L8 11		60	-	-	293
Office L8 12		60	-	-	290
Office L8 13		60	-	-	293
Office L8 14		60	-	-	300
Office L8 15		60	-	-	296
Office L8 16		60	-	-	298
Office L8 17		60	-	-	302
Office L8 18		60	-	-	285
Office L8 19		60	-	-	288
Office L8 20		60	-	-	291
Office L3 21		60	-	-	285
Office L3 22		60	-	-	280
Office L3 23		60	-	-	285
Office L3 24		60	-	-	106
Office L3 25		60	-	-	292
Office L3 26		60	-	-	168
Office L3 27		60	-	-	84
Office L3 28		60	-	-	302
Office L3 29		60	-	-	244
Office L3 30		60	-	-	316
Office L3 31		60	-	-	280
Office L3 32		60	-	-	259
Office L4 21		60	-	-	285
Office L4 22		60	-	-	280
Office L4 23		60	-	-	285
Office L4 24		60	-	-	106

General lighting and display lighting		Luminous efficacy [lm/W]			General lighting [W]
Zone name		Luminaire	Lamp	Display lamp	
	Standard value	60	60	22	
Office L4 25		60	-	-	167
Office L4 26		60	-	-	292
Office L4 27		60	-	-	84
Office L4 28		60	-	-	302
Office L4 29		60	-	-	316
Office L3 33		60	-	-	284
Office L3 34		60	-	-	287
Office L4 30		60	-	-	244
Office L4 31		60	-	-	287
Office L4 32		60	-	-	284
Office L4 33		60	-	-	259
Office L4 34		60	-	-	280
Office L5 21		60	-	-	285
Office L5 22		60	-	-	280
Office L5 23		60	-	-	285
Office L5 24		60	-	-	107
Office L5 25		60	-	-	167
Office L5 26		60	-	-	292
Office L5 27		60	-	-	84
Office L5 28		60	-	-	302
Office L5 29		60	-	-	244
Office L5 30		60	-	-	316
Office L5 31		60	-	-	287
Office L5 32		60	-	-	284
Office L5 33		60	-	-	259
Office L5 34		60	-	-	280
Office L6 21		60	-	-	285
Office L6 22		60	-	-	280
Office L6 23		60	-	-	285
Office L6 24		60	-	-	106
Office L6 25		60	-	-	167
Office L6 26		60	-	-	292
Office L6 27		60	-	-	84
Office L6 28		60	-	-	302
Office L6 29		60	-	-	244
Office L6 30		60	-	-	316
Office L6 31		60	-	-	287
Office L6 32		60	-	-	284
Office L6 33		60	-	-	259
Office L6 34		60	-	-	280
Office L7 21		60	-	-	285
Office L7 22		60	-	-	281
Office L7 23		60	-	-	285

General lighting and display lighting		Luminous efficacy [lm/W]			General lighting [W]
Zone name		Luminaire	Lamp	Display lamp	
	Standard value	60	60	22	
Office L7 24		60	-	-	107
Office L7 25		60	-	-	167
Office L7 26		60	-	-	296
Office L7 27		60	-	-	84
Office L7 28		60	-	-	302
Office L7 29		60	-	-	244
Office L7 30		60	-	-	316
Office L7 31		60	-	-	287
Office L7 32		60	-	-	284
Office L7 33		60	-	-	259
Office L7 34		60	-	-	280
Office L8 21		60	-	-	285
Office L8 22		60	-	-	280
Office L8 23		60	-	-	285
Office L8 24		60	-	-	167
Office L8 25		60	-	-	107
Office L8 26		60	-	-	292
Office L8 27		60	-	-	84
Office L8 28		60	-	-	302
Office L8 29		60	-	-	244
Office L8 30		60	-	-	316
Office L8 31		60	-	-	287
Office L8 32		60	-	-	284
Office L8 33		60	-	-	259
Office L8 34		60	-	-	280
Office M 7		60	-	-	144
Office M 8		60	-	-	269
Office M 9		60	-	-	373
Office M 10		60	-	-	139
Office M 11		60	-	-	261
Office M 12		60	-	-	377
Office M 13		60	-	-	141
Office M 14		60	-	-	263
Office M 15		60	-	-	384
Office M 16		60	-	-	143
Office M 17		60	-	-	824
Office M 18		60	-	-	370
Office M 19		60	-	-	431
Office M 20		60	-	-	796
Office M 21		60	-	-	367
Office M 22		60	-	-	421
Office M 23		60	-	-	778
Office M 24		60	-	-	292

General lighting and display lighting		Luminous efficacy [lm/W]			General lighting [W]
Zone name		Luminaire	Lamp	Display lamp	
	Standard value	60	60	22	
Office M 25		60	-	-	799
Office M 26		60	-	-	387
Office M 27		60	-	-	232
Office M 28		60	-	-	824
Office M 29		60	-	-	672
Office M 30		60	-	-	864
Office M 31		60	-	-	597
Office M 32		60	-	-	755
Office M 33		60	-	-	711
Office M 34		60	-	-	743
Basement 1 Bike Store		131	-	-	37
Basement 2 Plant		160	-	-	48
Basement 3 Plant		160	-	-	58
Basement 4 Plant		160	-	-	35
Basement 5 Circulation		-	181	-	48
Basement 6 Circulation		-	181	-	53
Basement 7 Circulation		-	103	-	65
Basement 10 Plant		160	-	-	229
Basement 11 Shower		-	93	-	15
Basement 12 Shower		-	93	-	13
Basement 13 Shower		-	93	-	13
Basement 14 Shower		-	93	-	13
Basement 15 Shower/WC		-	100	-	52
Basement 16 Drying Room		100	-	-	14
Basement 17 Lockers		-	93	-	125
Basement 18 WC		-	93	-	25
Basement 19 Store		160	-	-	5
Basement 20 Store		160	-	-	4
Basement 21 Store		160	-	-	6
Basement 23 Plant		160	-	-	34
Basement 24 Carpark		-	131	-	1456
stairs B.1		-	118	-	50
Office G 20		60	-	-	259
Office M 1		60	-	-	257

Criterion 3: The spaces in the building should have appropriate passive control measures to limit solar gains

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
Office G 1	YES (+0%)	NO
Office G 2	NO (-84%)	NO
Office G 3	YES (+13%)	NO
Office G 4	NO (-82%)	NO
Office G 5	NO (-88%)	NO
Office L1 1	YES (+4%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
Office L1 2	NO (-1%)	NO
Office L1 3	YES (+12%)	NO
Office L1 4	NO (-83%)	NO
Office L1 5	YES (+13%)	NO
Office L1 6	NO (-1%)	NO
Office L1 7	NO (-86%)	NO
Office L2 1	NO (-10%)	NO
Office L2 2	NO (-15%)	NO
Office L2 3	NO (-5%)	NO
Office L2 4	NO (-86%)	NO
Office L2 5	NO (-5%)	NO
Office L2 6	NO (-15%)	NO
Office L2 7	NO (-88%)	NO
Office G 6	YES (+11%)	NO
Office G 7	YES (+5%)	NO
Office M 2	NO (-22%)	NO
Office M 3	NO (-14%)	NO
Office M 4	NO (-86%)	NO
Office M 5	NO (-13%)	NO
Office M 6	NO (-94%)	NO
Office G 8	NO (-87%)	NO
Office G 9	NO (-15%)	NO
Office G 10	NO (-82%)	NO
Office G 11	YES (+9%)	NO
Office G 12	NO (-88%)	NO
Office G 13	YES (+5%)	NO
Office G 14	YES (+157%)	NO
Office G 15	YES (+8%)	NO
Office G 16	YES (+16%)	NO
Office G 19	NO (-87%)	NO
Office L1 8	YES (+15%)	NO
Office L1 9	NO (-6%)	NO
Office L1 10	NO (-85%)	NO
Office L1 11	YES (+16%)	NO
Office L1 12	NO (-6%)	NO
Office L1 13	NO (-85%)	NO
Office L1 14	YES (+13%)	NO
Office L1 15	NO (-7%)	NO
Office L1 16	NO (-85%)	NO
Office L1 17	YES (+10%)	NO
Office L1 18	NO (-4%)	NO
Office L1 19	NO (-85%)	NO
Office L1 20	YES (+13%)	NO
Office L2 8	NO (-1%)	NO
Office L2 9	NO (-19%)	NO
Office L2 10	NO (-88%)	NO
Office L2 11	NO (-1%)	NO
Office L2 12	NO (-19%)	NO
Office L2 13	NO (-88%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
Office L2 14	NO (-4%)	NO
Office L2 15	NO (-20%)	NO
Office L2 16	NO (-88%)	NO
Office L2 17	NO (-7%)	NO
Office L2 18	NO (-17%)	NO
Office L2 19	NO (-88%)	NO
Office L2 20	NO (-4%)	NO
Office L1 21	NO (0%)	NO
Office L1 22	NO (-85%)	NO
Office L1 23	YES (+13%)	NO
Office L1 24	NO (-83%)	NO
Office L1 25	YES (+10%)	NO
Office L1 26	NO (-87%)	NO
Office L1 27	YES (+4%)	NO
Office L1 28	NO (-91%)	NO
Office L1 29	NO (-83%)	NO
Office L1 30	YES (+7%)	NO
Office L1 31	YES (+9%)	NO
Office L1 32	YES (+24%)	NO
Office L1 33	YES (+22%)	NO
Office L1 34	NO (-79%)	NO
Office L2 21	NO (-13%)	NO
Office L2 22	NO (-87%)	NO
Office L2 23	NO (-4%)	NO
Office L2 24	NO (-86%)	NO
Office L2 25	NO (-6%)	NO
Office L2 26	NO (-89%)	NO
Office L2 27	NO (-11%)	NO
Office L2 28	NO (-92%)	NO
Office L2 29	NO (-85%)	NO
Office L2 30	NO (-8%)	NO
Office L2 31	NO (-5%)	NO
Office L2 32	YES (+10%)	NO
Office L2 33	YES (+6%)	NO
Office L2 34	NO (-82%)	NO
Office G 29 Lift Lobby	NO (-58%)	NO
Reception Entrance Zone 1	YES (+3%)	NO
Reception Entrance Zone 2	YES (+16%)	NO
Reception Entrance Zone 3	NO (-15%)	NO
Office L3 1	YES (+4%)	NO
Office L3 2	NO (-1%)	NO
Office L3 3	YES (+11%)	NO
Office L3 4	YES (+12%)	NO
Office L3 5	NO (-82%)	NO
Office L3 6	NO (-85%)	NO
Office L3 7	NO (-1%)	NO
Office L3 8	YES (+17%)	NO
Office L3 9	NO (-6%)	NO
Office L3 10	NO (-84%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
Office L3 11	YES (+16%)	NO
Office L3 12	NO (-6%)	NO
Office L3 13	NO (-84%)	NO
Office L3 14	YES (+13%)	NO
Office L3 15	NO (-7%)	NO
Office L3 16	NO (-84%)	NO
Office L3 17	YES (+10%)	NO
Office L3 18	NO (-4%)	NO
Office L3 19	NO (-84%)	NO
Office L3 20	YES (+13%)	NO
Office L4 1	NO (-10%)	NO
Office L4 2	NO (-15%)	NO
Office L4 3	NO (-5%)	NO
Office L4 4	NO (-5%)	NO
Office L4 5	NO (-86%)	NO
Office L4 6	NO (-88%)	NO
Office L4 7	NO (-15%)	NO
Office L4 8	NO (-1%)	NO
Office L4 9	NO (-18%)	NO
Office L4 10	NO (-88%)	NO
Office L4 11	NO (-1%)	NO
Office L4 12	NO (-19%)	NO
Office L4 13	NO (-88%)	NO
Office L4 14	NO (-3%)	NO
Office L4 15	NO (-20%)	NO
Office L4 16	NO (-88%)	NO
Office L4 17	NO (-6%)	NO
Office L4 18	NO (-17%)	NO
Office L4 19	NO (-88%)	NO
Office L4 20	NO (-4%)	NO
Office L5 1	YES (+4%)	NO
Office L5 2	NO (-1%)	NO
Office L5 3	YES (+11%)	NO
Office L5 4	YES (+12%)	NO
Office L5 5	NO (-82%)	NO
Office L5 6	NO (-1%)	NO
Office L5 7	NO (-85%)	NO
Office L5 8	YES (+17%)	NO
Office L5 9	NO (-5%)	NO
Office L5 10	NO (-84%)	NO
Office L5 11	YES (+16%)	NO
Office L5 12	NO (-6%)	NO
Office L5 13	NO (-84%)	NO
Office L5 14	YES (+13%)	NO
Office L5 15	NO (-7%)	NO
Office L5 16	NO (-84%)	NO
Office L5 17	YES (+10%)	NO
Office L5 18	NO (-4%)	NO
Office L5 19	NO (-84%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
Office L5 20	YES (+13%)	NO
Office L6 1	NO (-10%)	NO
Office L6 2	NO (-15%)	NO
Office L6 3	NO (-5%)	NO
Office L6 4	NO (-5%)	NO
Office L6 5	NO (-86%)	NO
Office L6 6	NO (-15%)	NO
Office L6 7	NO (-88%)	NO
Office L6 8	NO (-1%)	NO
Office L6 9	NO (-18%)	NO
Office L6 10	NO (-88%)	NO
Office L6 11	NO (-1%)	NO
Office L6 12	NO (-18%)	NO
Office L6 13	NO (-88%)	NO
Office L6 14	NO (-4%)	NO
Office L6 15	NO (-20%)	NO
Office L6 16	NO (-88%)	NO
Office L6 17	NO (-6%)	NO
Office L6 18	NO (-17%)	NO
Office L6 19	NO (-88%)	NO
Office L6 20	NO (-4%)	NO
Office L7 1	YES (+4%)	NO
Office L7 2	NO (-1%)	NO
Office L7 3	YES (+11%)	NO
Office L7 4	NO (-82%)	NO
Office L7 5	YES (+12%)	NO
Office L7 6	YES (+17%)	NO
Office L7 7	NO (-1%)	NO
Office L7 8	NO (-85%)	NO
Office L7 9	NO (-5%)	NO
Office L7 10	NO (-84%)	NO
Office L7 11	YES (+16%)	NO
Office L7 12	NO (-6%)	NO
Office L7 13	NO (-84%)	NO
Office L7 14	YES (+13%)	NO
Office L7 15	NO (-7%)	NO
Office L7 16	NO (-84%)	NO
Office L7 17	YES (+10%)	NO
Office L7 18	NO (-3%)	NO
Office L7 19	NO (-84%)	NO
Office L7 20	YES (+13%)	NO
Office L8 1	NO (-9%)	NO
Office L8 2	NO (-14%)	NO
Office L8 3	NO (-4%)	NO
Office L8 4	NO (-85%)	NO
Office L8 5	NO (-3%)	NO
Office L8 6	NO (-13%)	NO
Office L8 7	NO (-88%)	NO
Office L8 8	NO (-2%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
Office L8 9	NO (-18%)	NO
Office L8 10	NO (-88%)	NO
Office L8 11	NO (-1%)	NO
Office L8 12	NO (-18%)	NO
Office L8 13	NO (-88%)	NO
Office L8 14	NO (-3%)	NO
Office L8 15	NO (-19%)	NO
Office L8 16	NO (-88%)	NO
Office L8 17	NO (-6%)	NO
Office L8 18	NO (-16%)	NO
Office L8 19	NO (-88%)	NO
Office L8 20	NO (-5%)	NO
Office L3 21	YES (+1%)	NO
Office L3 22	NO (-84%)	NO
Office L3 23	YES (+13%)	NO
Office L3 24	NO (-82%)	NO
Office L3 25	YES (+10%)	NO
Office L3 26	NO (-77%)	NO
Office L3 27	NO (-86%)	NO
Office L3 28	YES (+5%)	NO
Office L3 29	NO (-81%)	NO
Office L3 30	YES (+10%)	NO
Office L3 31	YES (+27%)	NO
Office L3 32	YES (+36%)	NO
Office L4 21	NO (-13%)	NO
Office L4 22	NO (-87%)	NO
Office L4 23	NO (-4%)	NO
Office L4 24	NO (-89%)	NO
Office L4 25	NO (-82%)	NO
Office L4 26	NO (-6%)	NO
Office L4 27	NO (-89%)	NO
Office L4 28	NO (-11%)	NO
Office L4 29	NO (-7%)	NO
Office L3 33	YES (+13%)	NO
Office L3 34	NO (-90%)	NO
Office L4 30	NO (-85%)	NO
Office L4 31	NO (-92%)	NO
Office L4 32	NO (0%)	NO
Office L4 33	YES (+19%)	NO
Office L4 34	YES (+10%)	NO
Office L5 21	YES (+1%)	NO
Office L5 22	NO (-84%)	NO
Office L5 23	YES (+13%)	NO
Office L5 24	NO (-83%)	NO
Office L5 25	NO (-77%)	NO
Office L5 26	YES (+10%)	NO
Office L5 27	NO (-86%)	NO
Office L5 28	YES (+5%)	NO
Office L5 29	NO (-80%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
Office L5 30	YES (+11%)	NO
Office L5 31	NO (-89%)	NO
Office L5 32	YES (+18%)	NO
Office L5 33	YES (+44%)	NO
Office L5 34	YES (+31%)	NO
Office L6 21	NO (-13%)	NO
Office L6 22	NO (-87%)	NO
Office L6 23	NO (-4%)	NO
Office L6 24	NO (-86%)	NO
Office L6 25	NO (-82%)	NO
Office L6 26	NO (-6%)	NO
Office L6 27	NO (-89%)	NO
Office L6 28	NO (-11%)	NO
Office L6 29	NO (-84%)	NO
Office L6 30	NO (-6%)	NO
Office L6 31	NO (-91%)	NO
Office L6 32	YES (+2%)	NO
Office L6 33	YES (+24%)	NO
Office L6 34	YES (+13%)	NO
Office L7 21	YES (+1%)	NO
Office L7 22	NO (-84%)	NO
Office L7 23	YES (+13%)	NO
Office L7 24	NO (-83%)	NO
Office L7 25	NO (-77%)	NO
Office L7 26	YES (+10%)	NO
Office L7 27	NO (-86%)	NO
Office L7 28	YES (+5%)	NO
Office L7 29	NO (-79%)	NO
Office L7 30	YES (+12%)	NO
Office L7 31	NO (-89%)	NO
Office L7 32	YES (+20%)	NO
Office L7 33	YES (+49%)	NO
Office L7 34	YES (+34%)	NO
Office L8 21	NO (-13%)	NO
Office L8 22	NO (-87%)	NO
Office L8 23	NO (-4%)	NO
Office L8 24	NO (-82%)	NO
Office L8 25	NO (-86%)	NO
Office L8 26	NO (-6%)	NO
Office L8 27	NO (-89%)	NO
Office L8 28	NO (-10%)	NO
Office L8 29	NO (-83%)	NO
Office L8 30	NO (-5%)	NO
Office L8 31	NO (-91%)	NO
Office L8 32	YES (+3%)	NO
Office L8 33	YES (+26%)	NO
Office L8 34	YES (+14%)	NO
Office M 7	NO (-91%)	NO
Office M 8	NO (-13%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
Office M 9	NO (-27%)	NO
Office M 10	NO (-88%)	NO
Office M 11	NO (-11%)	NO
Office M 12	NO (-25%)	NO
Office M 13	NO (-87%)	NO
Office M 14	NO (-12%)	NO
Office M 15	NO (-25%)	NO
Office M 16	NO (-91%)	NO
Office M 17	NO (-25%)	NO
Office M 18	NO (-24%)	NO
Office M 19	NO (-90%)	NO
Office M 20	NO (-22%)	NO
Office M 21	NO (-18%)	NO
Office M 22	NO (-90%)	NO
Office M 23	NO (-20%)	NO
Office M 24	NO (-87%)	NO
Office M 25	NO (-23%)	NO
Office M 26	NO (-74%)	NO
Office M 27	NO (-92%)	NO
Office M 28	NO (-27%)	NO
Office M 29	NO (-85%)	NO
Office M 30	NO (-26%)	NO
Office M 31	NO (-89%)	NO
Office M 32	NO (-31%)	NO
Office M 33	NO (-26%)	NO
Office M 34	NO (-22%)	NO
Office G 20	YES (+0%)	NO
Office M 1	NO (-19%)	NO

Criterion 4: The performance of the building, as built, should be consistent with the calculated BER

Separate submission

Criterion 5: The necessary provisions for enabling energy-efficient operation of the building should be in place

Separate submission

EPBD (Recast): Consideration of 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?	YES

Technical Data Sheet (Actual vs. Notional Building)

Building Global Parameters

	Actual	Notional
Area [m ²]	2555	2555
External area [m ²]	13423	13423
Weather	MAN	MAN
Infiltration [m ³ /hm ² @ 50Pa]	3	3
Average conductance [W/K]	10828	5635
Average U-value [W/m ² K]	0.81	0.42
Alpha value* [%]	6.54	6.54

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

Building Use

% Area	Building Type
	A1/A2 Retail/Financial and Professional services
	A3/A4/A5 Restaurants and Cafes/Drinking Est./Takeaways
100	B1 Offices and Workshop businesses
	B2 to B7 General Industrial and Special Industrial Groups
	B8 Storage or Distribution
	C1 Hotels
	C2 Residential Institutions: Hospitals and Care Homes
	C2 Residential Institutions: Residential schools
	C2 Residential Institutions: Universities and colleges
	C2A Secure Residential Institutions
	Residential spaces
	D1 Non-residential Institutions: Community/Day Centre
	D1 Non-residential Institutions: Libraries, Museums, and Galleries
	D1 Non-residential Institutions: Education
	D1 Non-residential Institutions: Primary Health Care Building
	D1 Non-residential Institutions: Crown and County Courts
	D2 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	7.72	5.89
Cooling	0	0
Auxiliary	0.25	0.22
Lighting	3.43	7
Hot water	4.88	5.3
Equipment*	37.18	37.18
TOTAL **	16.28	18.4

* 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	0.61	0
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	25.24	18.25
Primary energy* [kWh/m ²]	35.05	34.61
Total emissions [kg/m ²]	4.6	6.6

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

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] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity										
Actual	122.1	0	39.3	0	1.1	0.86	0	0.96	0	
Notional	82.2	0	27.9	0	1.1	0.82	0	----	----	
[ST] Central heating using water: radiators, [HS] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity										
Actual	211.6	0	68.2	0	3.9	0.86	0	0.96	0	
Notional	198.8	0	67.4	0	2.3	0.82	0	----	----	
[ST] Constant volume system (fixed fresh air rate), [HS] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity										
Actual	41.3	140.5	13.3	6.9	55.5	0.86	5.65	0.96	5.95	
Notional	13.3	109.8	4.5	8.5	12.5	0.82	3.6	----	----	

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

Key Features

The Building Control Body is advised to give particular attention to items whose specifications are better than typically expected.

Building fabric

Element	U _{i-Typ}	U _{i-Min}	Surface where the minimum value occurs*
Wall	0.23	0.25	Basement wall
Floor	0.2	0.22	Ground Floor
Roof	0.15	0.15	Roof
Windows, roof windows, and rooflights	1.5	0.4	Glazing in void
Personnel doors	1.5	1.11	Double Door Back
Vehicle access & similar large doors	1.5	-	No vehicle doors in project
High usage entrance doors	1.5	1.11	Automatic Pedestrian Doors
U _{i-Typ} = Typical individual element U-values [W/(m²K)]		U _{i-Min} = Minimum individual element U-values [W/(m²K)]	
* There might be more than one surface where the minimum U-value occurs.			

Air Permeability	Typical value	This building
m³/(h.m²) at 50 Pa	5	2.83