BRUKL Output Document

Compliance with England Building Regulations Part L 2021

Project name

Certifier details

Name: Name

TYM - Be Lean

Date: Thu Oct 06 15:30:51 2022

Administrative information

Building Details Address: Address 1, City, Postcode

Telephone number: Phone

Address: Street Address, City, Postcode

Certification tool

Calculation engine: Apache Calculation engine version: 7.0.15 Interface to calculation engine: IES Virtual Environment Interface to calculation engine version: 7.0.15 BRUKL compliance check version: v6.1.b.0

Foundation area [m²]: 103.02

The 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	D₂/m²annum 11.63				
Building CO ₂ emission rate (BER), kgCO ₂ /m ² annum	8.1				
Target primary energy rate (TPER), kWh/m?annum	72.25				
Building primary energy rate (BPER), kWh/m2annum	51.95				
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	Ua-Limit	Ua-Calc	Ui-Calc	First surface with maximum value
Walls*	0.26	0.13	0.13	01000024:Surf[1]
Floors	0.18	0.08	0.08	01000024:Surf[0]
Pitched roofs	0.16	0.1	0.1	FF000009:Surf[0]
Flat roofs	0.18	0.1	0.1	RM000009:Surf[0]
Windows** and roof windows	1.6	1	1	01000024:Surf[2]
Rooflights***	2.2	-	-	No roof lights in building
Personnel doors^	1.6	1	1	01000024:Surf[8]
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
Ua-Limit = Limiting area-weighted average U-values [W/(m ²	K)]	U i-Calc = Ca	alculated maximum individual element U-values [W/(m ² K)]	

 $U_{a-Calc} = Calculated area-weighted average U-values [W/(m^2K)]$

* 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.

^ For fire doors, limiting U-value is 1.8 W/m²K

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	Limiting standard	This building
m³/(h.m²) at 50 Pa	8	1

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As designed

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					
Whole building electric power factor achieved by power factor correction	>0.95				

1- Be Lean - VRV Cooling

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(I/s)]	HR efficiency						
This system	0.93	6	0	-	-						
Standard value	0.93*	5	N/A	N/A	N/A						
Automatic moni	toring & targeting w	ith alarms for out-of	-range values for thi	is HVAC syster	n NO						
	* Standard shown is for gas single boiler systems <=2 MW output and overall for multi-boiler systems. For single boiler systems >2 MW or any individual boiler in a multi-boiler system, limiting efficiency is 0.88.										

2- Be Lean - Air Distribution

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(I/s)]	HR efficiency					
This system	0.91	-	0	1.8	0.8					
Standard value	0.91	N/A	N/A	1.9^	N/A					
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system NO										

^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.

3- Be Lean - UF Heating & Nat. Vent.

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency					
This system	0.93	-	0.49	-	-					
Standard value	0.93*	N/A	N/A	N/A	N/A					
Automatic moni	toring & targeting w	ith alarms for out-of	-range values for thi	is HVAC syster	n NO					
* Standard shown is for gas single boiler systems <=2 MW output and overall for multi-boiler systems. For single boiler systems >2 MW or any individual boiler in a multi-boiler system, limiting efficiency is 0.88.										

4- Be Lean - LTHW Rad. & Nat. Vent

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(I/s)]	HR efficiency				
This system	0.93	-	0.5	-	-				
Standard value	0.93*	N/A	N/A	N/A	N/A				
Automatic moni	toring & targeting w	ith alarms for out-of	-range values for thi	is HVAC syster	n NO				
* Standard shown is for gas single boiler systems <=2 MW output and overall for multi-boiler systems. For single boiler systems >2 MW or any individual boiler in a multi-boiler system, limiting efficiency is 0.88.									

5- Be Lean - Electric Heating

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(I/s)]	HR efficiency					
This system	0.93	-	-	-	-					
Standard value	0.93*	N/A	N/A	N/A	N/A					
Automatic moni	toring & targeting w	ith alarms for out-of	-range values for thi	is HVAC syster	n NO					
	* Standard shown is for gas single boiler systems <=2 MW output and overall for multi-boiler systems. For single boiler systems >2 MW or any individual boiler in a multi-boiler system, limiting efficiency is 0.88.									

"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
Α	Local supply or extract ventilation units
В	Zonal supply system where the fan is remote from the zone
С	Zonal extract system where the fan is remote from the zone
D	Zonal balanced supply and extract ventilation system
Е	Local balanced supply and extract ventilation units
F	Other local ventilation units
G	Fan assisted terminal variable air volume units
Н	Fan coil units
Ι	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/(I/s)]										
ID of system type	Α	В	С	D	E	F	G	Н	I	HR efficienc		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard	
RB1_003a Acc WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB1_004a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB1_005a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB1_006a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB1_007a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB1_008a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB1_009a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB1_010a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB1_011a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB1_012a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB1_013a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB2_003a Acc WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB2_004a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB2_005a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB2_006a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB2_007a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB2_008a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB2_009a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB2_010a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB2_011a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB2_012a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB2_013a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB3_003a Acc WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB3_004a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB3_005a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB3_006a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB3_007a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB3_008a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB3_009a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	
RB3_010a WC	-	-	0.4	-	-	-	-	-	-	-	N/A	

Zone name		SFP [W/(I/s)]										
	ID of system type	Α	В	С	D	Е	F	G	Н	I	HR efficiency	
	Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
RB3_011a WC		-	-	0.4	-	-	-	-	-	-	-	N/A
RB3_012a WC		-	-	0.4	-	-	-	-	-	-	-	N/A
RB3_013a WC		-	-	0.4	-	-	-	-	-	-	-	N/A

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [Im/W] Power density [W/r	
Standard value	95	80	0.3
CB_018 Classroom / Social	110	-	-
CB_033 WC	110	-	-
CB_034 WC	110	-	-
CB_036 WC	110	-	-
CB_043 WC	110	-	-
CB_044 WC	110	-	-
CB_046 Shower	110	-	-
CB_047 Shower	110	-	-
CB_059 Urinal	110	-	-
CB_061 WC	110	-	-
CB_062 WC	110	-	-
CB_063 WC	110	-	-
CB_064 Drying Storage	110	-	-
CB_065 Plantroom	110	-	-
CB_066 Acc. Shower/WC	110	-	-
CB_067 Acc. Shower/WC	110	-	-
CB_068 Shower	110	-	-
CB_069 Shower	110	-	-
CB_070 Shower	110	-	-
CB_071 Shower	110	-	-
CB_072 Shower	110	-	-
CB_073 Shower	110	-	-
CB_074 Shower	110	-	-
CB_075 Shower	110	-	-
CB_076 Clnrs	110	-	-
CB_078 Circulation	110	-	-
CB_079 WC	110	-	-
CB_080 WC	110	-	-
CB_081 Circulation	110	-	-
FF_017m Hallway	110	-	-
FF_017n Overnight Bedroom	110	-	-
FF_017o Bed 01	110	-	-
FF_017p Bed 01	110	-	-
FF_017q Bed 03 (Acc.)	110	-	-
FF_017r Adapt. Bathroom	110	-	-
FF_017s Store	110	-	-

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [Im/W]	Efficacy [lm/W]	Power density [W/m ²]
Standard value	95	80	0.3
FF_017t Ensuite	110	-	-
FF_017v Living Area	110	-	-
FF_017w Store	110	-	-
FF_105 Internal Plant	110	-	-
FF_105a Plant Lobby	110	-	-
GF_001 Entrance Lobby	110	15	9
GF_003 Cln. Store	110	-	-
GF_004 Acc. WC	110	-	-
GF_005 General Office	110	-	-
GF_007 Circulation	110	-	-
GF_008 First Aid	110	-	-
GF_010 Flexible Meeting/Learning Room	110	-	-
GF_012 Office	110	-	-
GF_013 Staff Lobby	110	-	-
GF_014 Staff Shower & WC	110	-	-
GF_015 Staff Shower & WC	110	-	-
GF_016 Staff Room	110	-	-
GF_017 WCs	110	-	-
GF_017c Server Room	110	-	-
GF_017d Lobby	110	-	-
GF_018 Main Hall	110	-	-
GF_019 Kitchen + Servery	110	-	-
GF_019a Staff WC	110	-	-
GF_019b Staff Changing	110	-	-
GF_019c Walk-in Fridge	110	-	-
GF_019d Walk-in Freezer	110	-	-
GF_019e Dry Store	110	-	-
GF_019f Cln. Store	110	-	-
GF_019g Office	110	-	-
GF_020 Lobby	110	-	-
GF_020a WC	110	-	-
GF_020b WC	110	-	-
GF_021 Showers 1	110	-	-
GF_022 Single Gender Change	110	-	-
GF_023 Changing 1	110	-	-
GF_024 Acc. WC + Shower	110	-	-
GF_025 Showers 2	110	-	-
GF_026 Single Gender Change	110	-	-
GF_027 Changing 2	110	-	-
GF_028 WCs	110	-	-
LG_L01 Lobby	110	-	-
LG_L02 WCs	110	-	
LG_L03 Acc. WC + Shower	110		

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [Im/W]	Efficacy [lm/W]	Power density [W/m ²]
Standard value	95	80	0.3
LG_L04 Changing	110	-	-
LG_L05 Showers 1	110	-	-
LG_L06 Single Gender Change	110	-	-
LG_L07 Changing 2	110	-	-
LG_L08 Showers 2	110	-	-
LG_L09 Single Gender Change	110	-	-
LG_L010 Drying Store	110	-	-
RB1_001 Lobby	110	-	-
RB1_002 Social & Learning	110	-	-
RB1_003 Acc Dormitory	110	-	-
RB1_003a Acc WC	110	-	-
RB1_004 Guardian Dormitory	110	-	-
RB1_004a WC	110	-	-
RB1_005 Dormitory	110	-	-
RB1_005a WC	110	-	-
RB1_006 Dormitory	110	-	-
RB1_006a WC	110	-	-
RB1_007 Dormitory	110	-	-
RB1_007a WC	110	-	-
RB1_008 Guardian Dormitory	110	-	-
RB1_008a WC	110	-	-
RB1_009 Dormitory	110	-	-
RB1_009a WC	110	-	-
RB1_010 Dormitory	110	-	-
RB1_010a WC	110	-	-
RB1_011 Dormitory	110	-	-
RB1_011a WC	110	-	-
RB1_012 Dormitory	110	-	-
RB1_012a WC	110	-	-
RB1_013 Guardian Dormitory	110	-	-
RB1_013a WC	110	-	-
RB1_014 Circulation	110	-	-
RB1_015 Store	110	-	-
RB1_016 Store	110	-	-
RB1_017 Plant	110	-	-
RB2_001 Lobby	110	-	-
RB2_002 Social & Learning	110	-	-
RB2_003 Acc Dormitory	110	-	-
RB2_003a Acc WC	110	-	-
 RB2_004 Guardian Dormitory	110	-	-
 RB2_004a WC	110	-	-
 RB2_005 Dormitory	110	-	-
 RB2_005a WC	110	-	-

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [Im/W]	Efficacy [lm/W]	Power density [W/m ²]
Standard value	95	80	0.3
RB2_006 Dormitory	110	-	-
RB2_006a WC	110	-	-
RB2_007 Dormitory	110	-	-
RB2_007a WC	110	-	-
RB2_008 Guardian Dormitory	110	-	-
RB2_008a WC	110	-	-
RB2_009 Dormitory	110	-	-
RB2_009a WC	110	-	-
RB2_010 Dormitory	110	-	-
RB2_010a WC	110	-	-
RB2_011 Dormitory	110	-	-
RB2_011a WC	110	-	-
RB2_012 Dormitory	110	-	-
 RB2_012a WC	110	-	-
RB2_013 Guardian Dormitory	110	-	-
RB2_013a WC	110	-	-
RB2_014 Circulation	110	-	-
RB2_015 Store	110	-	-
RB2_016 Store	110	-	-
RB2_017 Plant	110	-	-
RB3_001 Lobby	110	-	-
RB3_002 Social & Learning	110		
RB3_003 Acc Dormitory	110	-	_
RB3_003a Acc WC	110		
RB3_004 Guardian Dormitory	110	-	-
RB3_004a WC	110	_	
RB3_005 Dormitory	110	-	_
RB3_005a WC	110		
RB3_006 Dormitory	110	-	
RB3_006a WC	110	-	-
RB3_007 Dormitory	110	-	-
RB3_007 Bolimitory RB3_007a WC	110	-	-
		-	-
RB3_008 Guardian Dormitory	110	-	-
RB3_008a WC	110	-	-
RB3_009 Dormitory	110	-	-
RB3_009a WC	110	-	-
RB3_010 Dormitory	110	-	-
RB3_010a WC	110	-	-
RB3_011 Dormitory	110	-	-
RB3_011a WC	110	-	-
RB3_012 Dormitory	110	-	-
RB3_012a WC	110	-	-
RB3_013 Guardian Dormitory	110	-	-

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [Im/W]	Efficacy [lm/W]	Power density [W/m ²]
Standard value	95	80	0.3
RB3_013a WC	110	-	-
RB3_014 Circulation	110	-	-
RB3_015 Store	110	-	-
RB3_016 Store	110	-	-
RB3_017 Plant	110	-	-
GF_006 Staff Accom. Access	110	-	-
FF_Circulation	110	-	-

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?
CB_018 Classroom / Social	NO (-61.5%)	NO
FF_017n Overnight Bedroom	NO (-52.8%)	NO
FF_017o Bed 01	NO (-61.2%)	NO
FF_017p Bed 01	NO (-63.8%)	NO
FF_017q Bed 03 (Acc.)	NO (-83.5%)	NO
FF_017v Living Area	NO (-68.1%)	NO
GF_001 Entrance Lobby	NO (-19%)	NO
GF_005 General Office	NO (-14.3%)	NO
GF_008 First Aid	NO (-100%)	NO
GF_010 Flexible Meeting/Learning Room	NO (-42.8%)	NO
GF_012 Office	N/A	N/A
GF_016 Staff Room	NO (-42%)	NO
GF_017c Server Room	N/A	N/A
GF_018 Main Hall	NO (-27.9%)	NO
GF_019g Office	N/A	N/A
RB1_002 Social & Learning	NO (-57.9%)	NO
RB1_003 Acc Dormitory	NO (-74.1%)	NO
RB1_004 Guardian Dormitory	NO (-62.3%)	NO
RB1_005 Dormitory	NO (-62.4%)	NO
RB1_006 Dormitory	NO (-61.6%)	NO
RB1_007 Dormitory	NO (-83.4%)	NO
RB1_008 Guardian Dormitory	NO (-89.2%)	NO
RB1_009 Dormitory	NO (-74.5%)	NO
RB1_010 Dormitory	NO (-73.7%)	NO
RB1_011 Dormitory	NO (-73.3%)	NO
RB1_012 Dormitory	NO (-73.1%)	NO
RB1_013 Guardian Dormitory	NO (-72.9%)	NO
RB2_002 Social & Learning	NO (-59.5%)	NO
RB2_003 Acc Dormitory	NO (-85.3%)	NO
RB2_004 Guardian Dormitory	NO (-74.3%)	NO
RB2_005 Dormitory	NO (-73.5%)	NO
RB2_006 Dormitory	NO (-73.5%)	NO
RB2_007 Dormitory	NO (-88.7%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
RB2_008 Guardian Dormitory	NO (-81.8%)	NO
RB2_009 Dormitory	NO (-58.5%)	NO
RB2_010 Dormitory	NO (-58.5%)	NO
RB2_011 Dormitory	NO (-58.7%)	NO
RB2_012 Dormitory	NO (-58.5%)	NO
RB2_013 Guardian Dormitory	NO (-58.6%)	NO
RB3_002 Social & Learning	NO (-70%)	NO
RB3_003 Acc Dormitory	NO (-76.4%)	NO
RB3_004 Guardian Dormitory	NO (-66.6%)	NO
RB3_005 Dormitory	NO (-66.1%)	NO
RB3_006 Dormitory	NO (-66.3%)	NO
RB3_007 Dormitory	NO (-86.9%)	NO
RB3_008 Guardian Dormitory	NO (-81%)	NO
RB3_009 Dormitory	NO (-56.2%)	NO
RB3_010 Dormitory	NO (-56.5%)	NO
RB3_011 Dormitory	NO (-56.2%)	NO
RB3_012 Dormitory	NO (-56.1%)	NO
RB3_013 Guardian Dormitory	NO (-56.5%)	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]	1956.6	1956.6
External area [m ²]	5204.7	5204.7
Weather	LON	LON
Infiltration [m ³ /hm ² @ 50Pa]	1	3
Average conductance [W/K]	887.32	1461.93
Average U-value [W/m ² K]	0.17	0.28
Alpha value* [%]	26.06	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
1	Residential Institutions: Hospitals and Care Homes
91	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
8	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
	Choro, Stand Alone Chilly Diook

Energy Consumption by End Use [kWh/m²]

	Actual	Notional
Heating	21.49	40.03
Cooling	1.44	0.39
Auxiliary	3.8	2.74
Lighting	6.13	7.84
Hot water	9.78	10.73
Equipment*	46.71	46.71
TOTAL**	42.63	61.73

* 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	1.73
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
Displaced electricity	0	1.73

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	83.92	136.92
Primary energy [kWh/m ²]	51.95	72.25
Total emissions [kg/m ²]	8.1	11.63

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: floor heating, [HS] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity											
	Actual	67.6	0	23.1	0	3.5	0.81	0	0.93	0	
	Notional	133	0	40.8	0	0.6	0.91	0			
[ST] Split or multi-split system, [HS] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity											
	Actual	81.8	110.8	30.1	7.2	0	0.75	4.26	0.93	6	
	Notional	155.9	32.4	47.8	1.9	0	0.91	4.63			
[ST] Central heating using water: radiators, [HS] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity											
	Actual	0	0	0	0	0	0.81	0	0.93	0	
	Notional	0	0	0	0	0	0.91	0			
[ST] Central heating using water: radiators, [HS] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity											
	Actual	42.7	0	16.4	0	2.6	0.72	0	0.93	0	
	Notional	6.7	0	2.1	0	0.9	0.91	0			
[ST] Central heating using air distribution, [HS] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity											
	Actual	62.4	0	20.5	0	11.1	0.85	0	0.91	0	
	Notional	148.5	0	45.6	0	5.5	0.91	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